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## CLINICAL LECTURE.

### COMPLETE PROLAPSE OF THE WOMB, BLADDER AND VAGINA, TOGETHER WITH AN EPITHE- LIOMA OF THE LATTER.—PARO- VARIAN CYST.—ADHERENT PLA- CENTA.

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*Gentlemen* :—The first case I bring before you is that of a woman who has come from a distance to see what can be done for her. She is sixty-three years of age and has been a sufferer for a long time. Her condition is truly distressing. In merely taking a glance at her, I can see that she has an arcus senilis, and that the calcareous degeneration of her blood-vessels is quite marked. Moreover, she is emaciated and broken down.

Upon inquiring into her history more closely, I find she has been married, when she was a young woman; that her husband is still living; that she never has had any children; and, that her genital organs have been in this prolapsed condition since she was a girl. Cancers of the cervix generally come from lacerations, which latter, from being the seats of fungous degeneration, become worse and worse, until malignant disease is developed; so that old maids have fibroid tumors; mothers have epitheliomata, and sterile wives have ovarian or tubal disease. Of course, these statements are very broad ones, and are subject to many exceptions.

In the present instance, the facts that the bladder is completely prolapsed and that the urine is constantly dribbling over the vagina are the two main local causes in the production of the epithelioma here noticed; but I cannot tell to what extent they have contributed to this effect, nor why the growth is situated on the left inferior

wall of the vagina, as it now stands in its inverted condition.

The pain that she has suffered from this growth has not been very great nor has it been constant; because the vagina is not a very sensitive part, nor is the cervix uteri. Therefore, epitheliomata and such growths on these parts are misleading; they are often overlooked for a long time, and the patient may allow them to go on, until she is aroused to her condition by the fœtor, bleeding, and her more or less impaired health; she then applies to a physician who insists upon a thorough examination and finds that the disease has so far advanced that he can do but little beyond rendering the balance of the patient's life more comfortable.

When the disease occurs within the uterus, the amount of suffering occasioned may be truly distressing, and it is useless to restrain the patient from the free use of opium or from anything else that may afford relief. (The patient was here, removed.)

In dealing with this woman I told her the truth and nothing but the truth; yet I did not tell her the whole truth, because I was afraid that the shock and the distress occasioned thereby would be too great for her. I informed her that she had an epithelioma, and that any operation at her age would be almost useless.

My treatment will be to apply to the foul-smelling surface, a piece of lint or cotton, wrung out of a one to four thousand solution of the bichloride of mercury, in order to lessen the danger of systemic poisoning, and also, to destroy the fœted odor. The stench that clings to the hands of the surgeon from merely being in contact with such diseased structures is truly disgusting, and the method I resort to in my own person to destroy it, is this: I begin my course of disinfection by washing my hands in soap and water; I next wash them in turpentine, ether or alcohol,—whichever one happens to be most convenient. I then give them another washing in

soap and water, and finish my course of antiseptic cleaning by rinsing them thoroughly in a one to five hundred solution of the bichloride of mercury. All these precautions should be taken in going from one patient to another, lest disease germs be carried, and we thus become the seat of infection to those whom we wish to cure. The clothes may also carry germs, so that they should always be protected during our operations with gowns or aprons, which have been rendered surgically clean for this purpose; or, what is best, let our outer garments, at least, be changed, before going from an infected patient to another.

In the present case, I shall advise that it be suggested to her physician, so soon as she returns home and is well rested, that he apply to the ulcerated part, a solution of fifteen grains of the bichloride of mercury in one ounce of flexible collodion. This will cause a slough, leaving a clean surface more amenable to treatment than is the present one. She is also to be placed on the use of arsenic, beginning with one drop of Fowler's solution and gradually increasing that amount until she reaches as much as fifteen minims after each meal, or until the stomach rebels. The manner in which this drug exerts its beneficial effect is by means of its alterative action. Of course, I do not practically understand much about what this means, but I do know from a long clinical experience, that the remedy does good; and I can here recall the case of a man who submitted to numerous operations for an epithelioma of the lip, and who was finally permanently cured by a course of this medicine.

#### PAROVARIAN CYST.

The next case, is that of a woman, aged forty-two years, who has been married eighteen years, and has given birth to nine children. Eighteen months ago she suffered with aphonia, which must have been the result of some nervous trouble. She was also, a short timesince, in bed for four weeks, during which time she did not suffer much pain, but, four times she managed to pass, from the vagina, as much as a bucketful of clear semen. After each of the aqueous discharges, the swelling of the abdomen became less for a while, at least; her other symptoms subsided, and she became very much better.

There is but one avenue from the abdominal cavity to the vagina, and that is through the Fallopian tubes. It is impossible to believe that the growth noticed in this case is a tubal tumor; because such tumors

are smaller, and give more pain than this one has caused. Now, at times, an ovarian cyst is communicable with the tubes, and this will explain these repeated emptyings and refillings, resulting, too, in so little systemic disturbance. But, whatever it is, I shall now begin a systematic examination, in order to find out.

In the first place, I must decide whether the abdomen is enlarged from the presence of something really within and distending it, or whether this enlargement be merely owing to increase of fat in the abdominal walls. This latter fact is always to be borne in mind, because it is a rock upon which young physicians sometimes go astray. About the climacteric, a woman begins to dodge her periods, or to miss them altogether. She increases in abdominal size, and imagines herself to be pregnant; if she be a multipara, having the same signs and feelings as she did at her previous pregnancies; or, if she be a primipara, experiencing them with even greater evidences than ever did her more fruitful sisters. Arrangements are made for the birth, which, however, does not take place. The family is disappointed, and the young doctor is mortified. This occurrence once happened in the life of an English Queen, much to the disappointment and even disgust of her political party, which was looking to her for an heir. How, then, am I to determine whether this enlargement is from a distension within the abdomen, or whether it is merely from a thickening of the abdominal walls? It is done in this manner: I press with one hand deeply on one side of the abdomen, and then strike the opposite side with my other hand. I can feel the thrill of the vibrations as they are transmitted through the fat. But, by getting my assistant to put his hand between mine, the thrill that is transmitted only by the fat is stopped. The vibrations in the substance below, or through the underlying strata are still transmitted; but they are deeper and they vary from the fat vibrations. The difference in the time or intensity of the transmissions of the vibrations helps me to tell also whether I am dealing with a fluid or a solid tumor; because the speed or fineness of the thrill varies according to the solidity of the transmitting medium. This helps me to exclude a solid tumor, apart from the common senses of touch and of feeling; apart from the double touch, or the necessary consideration of the much more serious symptoms which a solid tumor of any kind would cause.

After arriving at the fact that I have a

liquid to deal with, I next have to decide whether there is a cyst or whether the fluid is loose in the abdominal cavity. I proceed to find this out by this mode of reasoning: If the fluid were loose, there would be dullness in the flanks, as the woman lies on her back, owing to the liquid seeking the lowest position. On the other hand, I would find resonance—as I do in this case—in the umbilical region; because the buoyant intestines would be floated up from below.

Examining per vaginam, I find that there is a small tear on the right side of the cervix. The womb is freely movable and measures plus three inches. Therefore, there is no solid tumor, and not finding any remnants of an ovarian cyst, I can yet state that I have made my diagnosis by finding nothing.

There is but one affection that would present itself as the diagnosis in this case, and that is a parovarian cyst. A parovarian cyst! you say, and what, pray, is that? As yet I am unprepared to answer this question with complete satisfaction to myself; but I know that it is thought to be a 'dropsy of one or more of the tubes of the parovarian. This word means near the ovary, and the name is given to several tubes on each side, which lie between the ovary and the Fallopian tubes. When one of them becomes cystic, the tumor may cause some pressure upon the ovary and give pain. It contains fluid as clear as spring water. It is highly refractive and greatly magnifies any object placed in the bottom of the vessel containing it. Just here I recall the case of a wife of a physician who had one of these parovarian cysts. It burst seven different times, causing a general collapse, together with the discharge of a large quantity of urine. It was finally removed by me. I would also mention that the fluid in the case of this tumor was slightly greenish. When these cysts collapse they generally leave nothing that can be felt because their walls are so thin. When tapped they may not return, but generally they do, and in time they have to be removed. Sometimes this removal can be effected without disturbing the ovary on that side; but usually the ovary is also implicated and has to be removed at the same time. The argument advanced for the removal of this growth is that there is a tendency in some cases for it to become a papillary carcinoma, especially when tapped.

#### ADHERENT PLACENTA.

The next and last case which I shall bring before you to-day, is a woman, who was delivered of a fetus, two months ago,

and since then she has suffered with metrorrhagia, owing to the adhesion of parts of the placenta, which were not removed at the time of confinement.

The womb measures plus three inches. There is now, and has been, since the labor, considerable bleeding, so I very carefully introduce my fenestrated forceps into the cavity of the uterus and upon removing them, I bring out a piece of the placenta. This immediately stops the bleeding. I now re-introduce the forceps and succeed in getting out another piece of the adherent membrane.

The placental tissue has had during these two months a vital connection, and has, therefore, not undergone putrefactive changes. I have removed a scroll-like placenta after seven months, and have found it undecomposed, because it had been all the time adherent.

My first measurement of the uterus gave me a plus three inches. It now measures four inches. The womb is larger than what it first seemed. Previously, when I introduced my sound, it rested on a piece of the placenta, which I have now removed.

If it be necessary to tampon in this case, I shall plug the cervix—not the vagina—with iodoform gauze, leaving a little piece of it protruding, by which the tampon can be withdrawn at any time. I shall not tampon if I can avoid it, because tamponing interferes with the firm contraction of the uterus.

Be sure to have a fenestrated forceps among your instruments. It is especially valuable after criminal abortions, in which cases, parts of the placenta are so often left adherent for the following reason: In natural abortions the ovum becomes, or rather has become, a foreign body, it has been detached from the endometrium; but in criminal abortions the fetus comes away, but parts of the membrane remain attached to cause hemorrhage and septicæmia. I often compare the results of a natural and of a criminal abortion with the falling off or dropping of a defective apple, or one that has been stung by an insect, to the violent tearing off of a green apple. The one drops off; the other is broken off. The one has its connection severed by nature's amputation, disease; and is removed so gradually that the parent stem does not suffer. Whereas in the latter case, the fruit is violently torn from the tree and a bleeding branch is left.

Gum chewers' cramp is a muscular incoordination similar to the cramp of writers, telegraphers, etc.



# **EMPHYSEMA.—GRIPPE AND ITS COMPLICATIONS.—CHRONIC HYPERTROPHIC CIR- RHOSIS OF THE LIVER.**

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## **EMPHYSEMA.**

*Gentlemen:* I present to you to-day a man 52 years old, a laborer by occupation, who says that he was in good health and able to do his usual work until six months ago, when he began to develop symptoms of catarrh of the nose and throat, and, also, some bronchitis. He has a cough, complains of dyspnea on exertion, and has palpitation of the heart. From the time he speaks of, that is six months ago, he has been getting steadily worse, and has been losing considerable flesh and strength.

On observing this man, we find that he is badly nourished, and has the expression of a person who is suffering from some real illness. Examination of the lungs gives us the physical signs of emphysema, with pleuritic adhesions over the top of the left lung. His heart is distinctly hypertrophied and dilated, but I can find no murmur present. He has a large heart, perfectly regular and forcible enough in its action and, if anything, a little exaggerated. There is some thickening of the radial and temporal arteries. He has a full and rapid pulse, but without any increase in tension. His urine has been examined a number of times, has a specific gravity of 1017, but contains no albumen.

The diagnosis of this man's trouble is by no means clear to me. He has evidently emphysema, but emphysema of itself is not sufficient to account for his present condition. There is no apparent change in the valves to any considerable extent, there is no evidence of any kidney lesion, no contraction of the arteries, nothing in fact very obvious to account for this marked increase in the size of his heart.

We might suppose this patient to have a chronic nephritis, but he should then have a heart simply hypertrophied, and not dilated and hypertrophied at the same time. We might suppose he has a chronic endo-arteritis, but then also there would be hypertrophy and not dilatation. Though his heart is increased

in size, his circulatory system is little, if any, changed. The pulse of this man seems to me to point to some febrile movement, and I should be inclined to think the real cause of his illness is one of those irregular fevers that belong to New York and its vicinity, and which sometimes continue for a considerable length of time. I would imagine the best thing for this man to do would be to go into some hospital where he would be put to bed and taken care of. The medicine which we usually give for such cases, if it should turn out to be one of continued fever, would be Warburg's Tincture, either in the form of the tincture or of capsules.

## **GRIPPE AND ITS COMPLICATIONS.**

The next patient is a man aged 39, who has evidently been suffering from an attack of the grippe, which began about a week ago, and he is not apparently free from it yet. The form which the disease has taken with him, has been of the ordinary character. He had first a fever, with frontal headache, which is quite characteristic, and an inflammation of the pharynx. He also had a feeling of depression, and was confined to his bed for some time. Although the first symptoms of the attack have passed away, he is still suffering, as many of those patients continue to do after the acute stage of the disease has passed.

The irregularity of this man's heart action is, I think, the result of the grippe. Probably, before the attack, he had a heart somewhat enlarged and perhaps not perfectly regular, but still it was a heart that gave him no trouble. He was able to work and felt tolerably well. Just before coming to this clinic I saw an old gentleman who had developed the same cardiac condition from the same cause as this man has. He was 70 years of age, and previous to the attack had enjoyed good health and had no idea there was anything the matter with his heart. He had an attack of the grippe two weeks ago, and as a result of this, his heart, which was somewhat large, has been doing its work very badly indeed, so that he was unable to lie down in bed without being propped up with pillows.

This is one of the many disagreeable features of this particular disease. It seems to evoke diseases which had been quiescent and had given the patient no trouble till its onset. These cases of grippe should, I think, be handled with a great deal of caution when the disease manifests itself with any great degree of severity. I confess that this year I think very much more seriously of



the disease than I did last year when it first made its appearance in our midst. Of course, the very worst feature of this affection is the pneumonia, which accompanies it; and, although having all the clinical characteristics of the pneumonia of last year, it is, however, of so much more fatal character that I consider it extremely desirable on the part of the patient, the moment he feels an attack of the grippe to go at once to bed and stay there till the fever has entirely disappeared; and even after that to wait a few days before he undertakes to do any kind of work. In this way he is less apt to have a complicating pneumonia than if he were to be up and about.

The type of the pneumonia that accompanies the grippe this year is characterized by an excess of bronchitis and an inability of the right heart to force the blood through the lungs. As a result of this condition of affairs the patient very soon develops a sibilant and sonorous breathing over both lungs, then coarse and subcrepitant râles, and he does not cough up very much mucus. As a result of this, the bronchi soon become filled with mucus, and the inability of the right heart to force the blood through the lungs shows itself in a general venous congestion which becomes more and more marked, and the patient's breathing, as a result of these conditions, becomes worse and worse, and so he goes on till he finally dies. A great many patients die in this way the first twenty-four hours after the attack of the pneumonia, while others last three days or more before they succumb to the disease.

Such cases of pneumonia are made even still more unsatisfactory for the reason that the ordinary means of treating this condition are of such little avail. Generally speaking, a general bronchitis can be relieved a good deal by efficient cupping, but this procedure is of no use whatever in the bronchitis of these patients. In ordinary cases of pneumonia cardiac stimulants have been found useful while in these cases their influence counts for nothing. A combination of venous congestion and feeble heart is usually beneficially affected by hypodermics of nitro-glycerine, but in many of these cases of pneumonia nitro-glycerine is of no use whatever.

So you can readily see why I look upon this complication of the grippe as such a serious matter, and why I advise you to take every precaution against it; and, as I have already said, the moment you begin to have the first characteristic symptoms of this affection, tell your patient to go to bed and

wait there till he gets better, and not expose himself to the danger of going out of doors.

#### CHRONIC HYPERTROPHIC CIRRHOSIS OF THE LIVER.

The next patient I present to you came here, for the first time, last December. Six months previous to that time he complained of pains in the back, his urine was yellow in color and his stools white. He then began to notice a lump in the hepatic region and began to lose flesh and to develop some jaundice. Since that time these symptoms have become somewhat modified in character. His jaundice has diminished in intensity and the skin of the face has assumed that dusky, brown hue that you now see. The general appearance of the man is not at all very bad. The increase in size of the liver is symmetrical and involves both the right and left lobes, and these project down into the abdominal cavity to a distance of some twelve inches from the free border of the ribs. The liver appears hard and nodular, but the spleen is of normal size, so that the liver in its increase has not offered any obstacle to the circulation of the blood through that organ. The blood circulates through the liver as usual and on that account we have no dropsy, and no enlargement of the spleen. This man then has a condition of the liver known by the name of hypertrophic cirrhosis.

The jaundice in this case is evidently of an obstructive kind and due to one of three causes, viz.: A calculus situated in the common bile duct; a chronic catarrhal condition of the common bile duct, or a new growth situated in its wall. We can, however, exclude a neoplasm as the causative factor in this case, for he would, no doubt, present a much worse condition physically than he at present exhibits. The diagnosis, therefore, rests between the other two conditions, and we are not now in a position to make a positive differential diagnosis. The probability, however, is that this man has been suffering all this time from a chronic catarrhal affection of the common bile duct.

The question of treatment next comes up for consideration. This patient has been given cold water enemata and put on the use of alkalies, but with no appreciable benefit. The difficulty seems to lie in our inability to exert a real local influence on the catarrh of the bile duct. To bring about that result I would recommend washing out his stomach systematically and regularly every morning, and, at the same time, giving him better food than he has been in the

habit of taking A change of climate would also be very beneficial in his case. There is one of the mineral waters which if taken in its native soil, viz.: Ems, in Germany, would prove of great benefit. If this patient were able to go there and take a systematic course of the waters of Ems, I have not the least doubt but that he would be very greatly benefited.

### COMMUNICATIONS.

#### THE THERAPEUTIC USES OF KAVA-KAVA.

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Though not commonly employed at present by the profession, Kava-Kava has a domestic history suggestive of highly valuable clinical properties. This entitles the drug to serious consideration, and it seems that the results obtained by various observers in the treatment of a certain class of cases, warrant its further and continuous use in practical medicine.

In a previous experimental study,<sup>1</sup> I have discussed the general physiological action of this drug, and found that it powerfully affected the circulation, exercising at the same time a stimulating influence on the respiration and nervous system. The most important properties of the plant, from a practical point of view, were, perhaps, those exercised on the mucus membrane, the liver and the nervous system, the remedy being especially a general and local anæsthetic and a depressant of the spinal motor apparatus. These actions have been noticed also by previous observers.

In the present paper I will treat of the therapeutic uses of the drug, with special reference to the literature of the subject which, in itself, is interesting and instructive. I will in the first place detail the following cases in which gratifying results have been achieved. With a view to determine whether the effects produced would be attributed solely to the influence of the drug, no other treatment was applied in some of the cases observed.

Case I. Gonorrhœa, S. G., age 19, dental student, of bilious temperament, with good family and previous individual history. Contracted the disease four months ago. Was under treatment since the appearance

of the first symptoms. Had taken copaiba and cubebs internally and for injections had used solutions of acetate of lead, sulphate of zinc and nitrate of silver. Very little relief was obtained; the painful micturition continued and the discharge, although not abundant, was yet a source of much annoyance and anxiety. Under my charge all other general and local treatment was put aside and the patient subjected to the use, internally, of the fluid extract of the Kava-Kava, fifteen drops three times a day. Amelioration was noticed in three days. In two weeks the patient was entirely well. The medicine was then suspended and no return of the disease occurred.

Case II. Gonorrhœa, J. L. F., 24 years of age, of nervous temperament, salesman by occupation, was suffering from a third attack of specific urethritis of a few days' standing. He said that the two previous attacks lasted for two and three months respectively, the disease having finally disappeared under general and local treatment and a rigorous diet. He complained of injections having been extremely painful. When the patient was first seen by me the discharge was abundant, and there was great pain in micturition. No stricture was detected, but there was undoubtedly a beginning inflammation of the bladder. He was immediately placed under Kava-Kava to the exclusion of all other remedies. Dose, twenty drops three times a day. Relief was experienced by the fourth day, with great lessening of the discharge and the burning pain on passing water. Improvement continued and at the end of the third week the patient considered himself entirely cured. There was no return of the malady for over two months after the suspension of the drug.

Case III. Chronic Gonorrhœa with Cystitis. M. A. C., medical student, age twenty-two, of a nervo-sanguine temperament, had for nearly two years suffered from an old case of specific urethritis complicated with cystitis, as a result of a third attack of the malady. The disease had never yielded to the usual remedies. A careful examination revealed no stricture, but the doubtless co-existence of prostatitis and a considerable cystitis. The discharge was scanty and muco-purulent, and although not always present there was, at times, great pain in micturition. The patient was advised to take Kava-Kava and to discontinue all other treatment. He began to take the drug immediately, and in comparatively large quantities—thirty to forty drops three times a day. In about two weeks great im-

<sup>1</sup> *The Therapeutic Gazette*, January 15, 1891.

improvement was noticed. All burning sensations had entirely gone, although the discharge continued. This, however, diminished gradually, but did not entirely disappear after two months' treatment. It was noticed that the drug considerably increased the amount of urine. The remedy was afterwards combined with sweet spirits of nitre, and although there was no stricture, the passing into the urethra, twice daily, of a sound smeared with belladonna ointment, was recommended. In about four months the patient, though not entirely well, reported satisfactory progress. At present (eight months afterwards) he continues to take the remedy, with fair chances of complete recovery. The cystitis had disappeared and there was a notable reduction in the size of the prostate gland. It may be stated that this patient was somewhat careless about diet and regular habits, and this circumstance, I think, has delayed a final and more rapid cure. The drug has not been taken with regularity.

The following two cases were kindly communicated to me by a practitioner to whom I suggested the use of the remedy:

Case IV. A colored boy, eight years of age, had been troubled with painful and frequent micturition for over six months. Had been examined carefully for calculous deposits, but no stone was found in the bladder, nor were there noticed any traces of gravel. The urine was scanty in amount, presented a high specific gravity, 1030, and of a decidedly alkaline reaction, but no albumen or sugar was found in it. The microscope revealed triple phosphates and a considerable quantity of pus corpuscles. By exclusion the case was diagnosed as one of chronic cystitis, and accordingly subjected to the usual treatments. Benzoic acid, benzoate of sodium and eucalyptol were employed, but with negative results. No relief being obtained by these and other measures, the patient was put under the exclusive use of Kava-Kava, in ten drop doses, twice a day, with wonderful results in the course of two weeks. A cure was effected in one month. One of the actions of the drug in this case was the notable increase of the quantity of urine.

Case V. Vaginitis. A shop girl, twenty-two years of age, of a sanguine temperament, single, but who had evidently fallen from grace, presented all the symptoms of a typical vaginitis as a probable sequence of a previous attack of gonorrhoea. History imperfect but sufficiently clear. Said that she had been under treatment by regular phy-

sicians for a long time but had obtained no apparent relief. Had taken medicine and used various injections, but all to no avail. She was placed exclusively under the use of Kava-Kava in doses of twenty drops, three times a day. A change for the better was noticed in about three weeks, and the abundant and fetid discharge had lessened to about one-half its original amount. The treatment was continued, and in three months the patient pronounced herself perfectly well. The medicine was then suspended, and she was requested to report if the disease should return. The case was not heard of afterwards, and it is presumed that the trouble did not reappear.

Other cases may be cited, but the short number reported here, is sufficient, I think, to corroborate the results obtained by other practitioners, and to show that the drug possesses valuable therapeutic properties. Kava-Kava is unquestionably of great service, especially in the treatment of the various inflammations of the mucus membranes, its action in these instances being chiefly a local one. There is no doubt that the drug is also a general stimulant and tonic.

No deleterious after-effects have been observed under the therapeutic action of the drug, although in some cases it has been asserted to produce a slight constipation. It further stated that when taken in excess as an intoxicating beverage it produces a peculiar skin eruption, known in Tahiti as *areverea*; and that, curiously enough, it has been used with success in erysipelatous eruptions.

In the cases above described, the preparation used was the fluid extract in doses of from ten to thirty drops, in water, three times a day. The drug has no disagreeable taste. Although other forms have been used by various observers, the fluid extract is the most reliable preparation. The remedy may be given by itself, or in combination with other drugs, such as sweet spirits of nitre, glycerine, iodide of potassium, etc., according to the indications of individual cases.

Kava-Kava is not a new therapeutic agent. Its value in the treatment of disease has long been recognized by reliable practitioners.

It was first recommended in gonorrhoea as far back as 1857<sup>1</sup> and we are told that in Nukahibi the natives use Kava-Kava, in small doses and at bed time, in the treatment of bronchitis and phthisis; and even

<sup>1</sup> *Pharmaceutical Journal*, IX, p. 218.

<sup>2</sup> *Annal. de Therapeutique*, 1857, p. 81.



in gout, it has been recommended internally and as a local application<sup>1</sup>.

An interesting physiological and therapeutical study of the drug was made several years ago by Dupuy<sup>2</sup> who found that the plant was a sialagogue and that it acted upon the stomach as a bitter tonic, improving the appetite without producing diarrhoea or constipation, and acting perhaps as a prophylactic to catarrhal affections of the upper part of the digestive canal; that it was a gentle excitant of the central nervous system, a powerful diuretic and an excellent blennostatic. The same author found the resin of Kava-Kava to be exceedingly valuable in the treatment of acute urethritis and vaginitis, relieving pain and diminishing the secretion.

Leighton Kesteren<sup>3</sup> asserts that the most marked and valuable property of Kava is its action upon the genito-urinary tract. He found that the drug readily cured chronic gonorrhoeal gleet, and that in chronic cystitis it possessed an influence superior to any other remedy he had ever used.

It has been prescribed with flattering success, by Edward Miller<sup>4</sup> in suppurative urethral inflammation. Four cases of cystitis have been cured by the same author.

The best results in the treatment of acute and chronic gonorrhoea have been obtained by C. C. Switzer<sup>5</sup> and J. P. Siddall.<sup>6</sup> The latter writer affirms to have cured also several cases of leucorrhoea, where other remedies had entirely failed.

A case of secondary gonorrhoeal inflammation and four cases of acute and chronic cystitis were cured by Kava-Kava after other remedies had failed, according to the report of R. A. French.<sup>7</sup> The same results were observed by J. P. Baird<sup>8</sup> in a case of rebellious urethritis, and in one of prostatitis, accompanied with painful urination.

In cases of painful micturition, from whatever cause, no remedy has given better results in the hands of W. J. Holman.<sup>9</sup>

The most excellent results have also been

produced by the drug, in the treatment of acute and chronic gonorrhoea, according to the reports of Boardman Reed,<sup>1</sup> W. Semple,<sup>2</sup> J. M. Blackberry,<sup>3</sup> and of the Charity Hospital of New York City.<sup>4</sup>

Another observer states that the plant produces a primary stimulating effect, increasing the secretion of the mucus membranes, afterwards acting as a tonic, improving the appetite and giving tone to the digestive organs, and in this respect, acting differently from copaiba and cubeba. This has been the experience of Alfred Fliesburg,<sup>5</sup> who has successfully treated with the drug, cases of cystitis and urethritis. He further asserts to have obtained excellent results in over a hundred cases of acute, sub-acute and chronic bronchitis.

Six cases of stubborn nocturnal incontinence of urine, where even belladonna failed to produce any relief, were cured with Kava-Kava, by C. N. Palmer.<sup>6</sup> In dropsy it has been employed with success by Herbert C. Rogers.<sup>7</sup> According to Weinstein<sup>8</sup> the good effects of the drug in cases of emphysema and tuberculosis were manifested against the dyspnoea. The same author found it valuable in acute polyarthritis, gonorrhoea, and catarrh of the bladder, where the remedy seemed to act as an analgesic. In small doses it was employed with success in acute and chronic catarrh of the stomach, in dyspepsia and cardialgia.

In carefully looking over the records of cases published, I have been able to collect a considerable number of well authenticated instances, where not only improvement, but a permanent benefit has been produced. I subjoin the following tables in the hope that they may be of some use to those interested in the subject. In these tables, among other features treated, statements are briefly made especially in regard to the affections for which Kava-Kava has been employed, together with the results obtained.

I do not pretend to have exhausted the literature of the subject, but I have not, so far, been able to find any other reports than those referred to in this article.

<sup>1</sup> *Medical Times and Gazette*, December, 1854.

<sup>2</sup> *La Tribune Medicale*, April 1879; also *Deut. Med. Wochenschr.*, No. 1, 1881.

<sup>3</sup> *The Practitioner*, quoted by *The Therapeutic Gazette*, May, 1882.

<sup>4</sup> *The Lancet*, quoted by *The Therapeutic Gazette*, April, 1880.

<sup>5</sup> *New Preparations*, April, 1879.

<sup>6</sup> *New Preparations*, August, 1879.

<sup>7</sup> *New Preparations*, July, 1879.

<sup>8</sup> *Therapeutic Gazette*, May, 1880.

<sup>9</sup> *Medical and Surgical Reporter*, Sept. 25, 1880.

<sup>1</sup> *The Therapeutic Gazette*, February, 1882.

<sup>2</sup> *The Therapeutic Gazette*, December, 1881.

<sup>3</sup> *The Therapeutic Gazette*, May, 1881.

<sup>4</sup> *The Therapeutic Gazette*, June, 1881.

<sup>5</sup> *The Therapeutic Gazette*, April, 1883.

<sup>6</sup> *The Therapeutic Gazette*, August, 1883.

<sup>7</sup> *The Medical News*, October, 1886.

<sup>8</sup> *Deuts. Medicinal-Zeitung*, December, 1887.

TABLES OF CASES TREATED BY KAVA-KAVA WITH THE RESULTS OBTAINED.

No.	Age.	Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By Whom and Where Reported.	Remarks.
1	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.— <i>Therapeutic Gazette</i> , April, 1880.	
2	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.— <i>Ibid.</i>	
3	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.— <i>Ibid.</i>	
4	(?)	(?)	(?)	Cystitis.	(?)	Recovery.	Miller, Edward.— <i>Ibid.</i>	
5	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.— <i>New Preparations</i> , July, 1879.	
6	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.— <i>Ibid.</i>	
7	(?)	(?)	Fluid extract, dosage not stated.	Cystitis.	(?)	Recovery.	French, R. A.— <i>Ibid.</i>	
8	(?)	(?)	Fluid extract, 15 drops, 3 times a day.	Chronic Cystitis.	(?)	Recovery.	French, R. A.— <i>Ibid.</i>	
9	(?)	M.	Fluid extract, teaspoonful 3 times a day.	Chronic Cystitis.	(?)	Recovery.	Baird, J. P.— <i>Therapeutic Gazette</i> , May, 1880.	
10	(?)	M.	Fluid extract, teaspoonful 3 times a day.	Prostatitis.	(?)	Recovery.	Baird, J. P.— <i>Ibid.</i>	
11	6 yrs.	M.	Fluid extract, 8 drops every 3 hours.	Cystitis.	4 days.	Recovery.	Holman, W. J.— <i>Medical and Surgical Reporter</i> , Sept. 25, 1880.	
12	50 yrs.	M.	Fluid extract, 25 drops 4 times a day.	Cystitis.	(?)	Recovery.	Holman, W. J.— <i>Ibid.</i>	Patient had chills and fever. Paroxysms of pain continued between chills.
13	23 yrs.	F.	Fluid extract, 15 drops 3 times a day.	Chronic Cystitis.	(?)	Recovery.	Holman, W. J.— <i>Ibid.</i>	
14	78 yrs.	M.	Fluid extract, 25 drops every 2 hours.	Retention of urine.	12 hours.	Recovery.	Holman, W. J.— <i>Ibid.</i>	
15	21 yrs.	M.	Fluid extract, 20 drops 3 times a day.	Gonorrhœa.	6 days.	Recovery.	Holman, W. J.— <i>Ibid.</i>	

No. Age. Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By Whom and Where Reported.	Remarks.
16 (?)	M. Fluid extract, 15 drops, 3 times a day.	Gonorrhœa.	3 days.	Recovery.	Reed, Boardman.— <i>Therapeutic Gazette</i> , Feb'y. 1882.	
17 (?)	M. Fluid extract, 15 drops, 3 times a day.	Gonorrhœa.	8 days.	Recovery.	Reed, Boardman.— <i>Ibid.</i>	
18 27 yrs.	M. Fluid extract, combined with sweet spirits nitre.	Gleet.	(?)	Recovery.	Blackberry, J. M.— <i>Therapeutic Gazette</i> , May, 1881.	
19 23 yrs.	M. Fluid extract combined with fluid extract of Berberis.	Gleet.	6 weeks.	Recovery.	Blackberry, J. M.— <i>Ibid.</i>	
20 (?)	(?) Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. <i>Therapeutic Gazette</i> , June, 1881.	
21 (?)	(?) Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. — <i>Ibid.</i>	
22 (?)	(?) Fluid extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. — <i>Ibid.</i>	
23 (?)	(?) Fluid Extract, dosage not stated.	Gonorrhœa.	(?)	Relieved.	Charity Hospital, N. Y. City. — <i>Ibid.</i>	
24 24 yrs.	M. Fluid extract, combined with fluid extract, Yerba Santa.	Gleet.	(?)	Recovery.	Fliesburg, Alfred.— <i>Therapeutic Gazette</i> , April, 1883.	
25 35 yrs.	F. Fluid extract, combined with buchu & eucalyptus.	Urethritis with cystitis.	(?)	Recovery.	Fliesburg, Alfred.— <i>Ibid.</i>	
26 50 yrs.	M. Fluid extract, combined with buchu & eucalyptus.	Cystitis with prostatitis.	(?)	Relieved.	Fliesburg, Albert.— <i>Ibid.</i>	
27 (?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Therapeutic Gazette</i> , Aug., 1883.	
28 (?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	
29 (?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	



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No.	Age.	Sex.	Dosage and Preparation Used.	Disease.	Duration of Treatment.	Result.	By whom and Where Reported.	Remarks.
29	(?)	(?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	
30	(?)	(?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	
31	(?)	(?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	
32	(?)	(?)	(?) Fluid extract, dosage not stated.	Incontinence of urine.	(?)	Recovery.	Palmer, C. N.— <i>Ibid.</i>	
33	27 yrs.	M.	Fluid extract, 30 minims every 3 hours.	Dropsy.	3 months.	Recovery.	Rogers, Herbert C.— <i>Med. News</i> , Oct. 16, 1886.	Patient had suffered from scarlet fever, when 17 years of age. Disease evidently due to cardiac disorder.
34	35 yrs.	F.	Fluid extract, 40 minims every 4 hours.	Dropsy.	2 months.	Relieved.	Rogers, Herbert C.— <i>Ibid.</i>	
35	31 yrs.	M.	Fluid extract, combined, with convallaria, 5 minims 3 times a day.	Dropsy.	2 months.	Relieved.	Rogers, Herbert C.— <i>Ibid.</i>	
36	16 yrs.	F.	Fluid extract, 40 drops every 3 hours, with tincture of the chloride of iron.	Dropsy.	A few weeks.	Recovery.	Rogers, Herbert C.— <i>Ibid.</i>	Patient had had scarlet fever 3 or 4 weeks previously.
37	19 yrs.	M.	Fluid extract, 15 drops 3 times a day.	Gonorrhoea.	2 weeks.	Recovery.	Author.	
38	24 yrs.	M.	Fluid extract, 20 drops 3 times a day.	Gonorrhoea.	3 weeks.	Recovery.	Author.	
39	22 yrs.	M.	Fluid extract 30 to 40 drops 3 times a day, in combination with sweet spirits of nitre.	Gleet with cystitis.	8 months.	Relieved.	Author.	Patient of irregular, or perhaps better careless habits. Medicine had not been taken with regularity.
40	8 yrs.	M.	Fluid extract, 10 drops, 3 times a day.	Chronic cystitis.	1 month.	Recovery.	Author.	
41	22 yrs.	F.	Fluid extract, 20 drops, 3 times a day.	Vaginitis.	3 months.	Recovery.	Author.	

To recapitulate, of the authenticated cases treated with Kava-Kava, as reported in this paper, there were:

*Relieved*—Gonorrhœa, 4; Cystitis, 1; Dropsy, 2; Gleet, 1; in all 8 cases.

*Cured*—Acute Cystitis, 9; Chronic Cystitis, 2; Gonorrhœa, 6; Prostatorrhœa, 1; Retention of Urine, 1; Gleet, 4; Urethritis, with Cystitis, 1; Incontinence, of urine, 6; Dropsy, 2; Vaginitis, 1; in all 33 cases.

Total forty-one cases.

It is thus seen that Kava-Kava, from these statistics, is a therapeutic agent of no inferior value, and worthy of further consideration. Certainly it does not deserve the neglect in which the remedy is at present held by the medical profession.

### THE EXPECTANT TREATMENT IN CASES OF SUSPECTED SYPHILITIC INFECTION.

BY HENRY BEATES, JR., M.D.,  
PHILADELPHIA.

Basereau, father of the Dualist School, wrote:

(1.) "If a person who has been affected with chancres, followed by constitutional symptoms, is confronted with the person who gave the infection, or with those to whom it has been communicated, it will be found that all such, without exception, have been affected with chancres followed by constitutional manifestations. The chancre is never purely local.

(2.) "On the other hand, if one who is affected with a chancre which has not been followed by any syphilitic symptom, be confronted by the person who has caused the infection, the former will be found to be the bearer of a chancre which is entirely local and which does not infect the constitution. This admits of no exceptions.

"Thus no chancre which is followed by constitutional symptoms gives rise to a purely local sore, nor does a local chancre by infection communicate an ulcer which is capable of producing syphilis."

These cardinal truths, when first proclaimed, enabled clinical distinctions to be made between the non-syphilitic lesion and true chancre, and upon the ability to recognize these respective lesions will treatment be largely determined.

When the clinical characteristics of initial lesions are typically pronounced, prognosis and treatment are self-evident, but, unfortu-

nately, like typhoid fever, and, indeed, all diseases, the departures are often so great that it is frequently absolutely impossible to diagnosticate the lesion, and here it is that we hesitate how to act. To illustrate: A patient two or three days after a suspicious confrontation suffers from a multiple ulcerative lesion. The time of development, character of abrasion, and clinical history, incline to the belief that we have before us a chancre. The sores are cauterized the patient is told that he is free from syphilis and is dismissed with the belief that he is suffering from a simple ulceration, which, in ten days will have healed and not be followed by constitutional trouble. In six weeks this individual probably returns because of a cold and an eruption which are recognized as the secondary phenomena of syphilis. The practitioner consults works of reference and consoles his mind with reading about a mixed sore, and pacifies the unfortunate syphilitic, and fortifies himself against criticism, by showing the victim the paragraph which affords such abundant diagnostic latitude. Without further discussion of this *ignis fatuus*—the mixed chancre—it is self-evident that a true description of it is, a venereal ulcer, the character of which can not be ascertained; if followed by syphilis (and a favorable prognosis had been given), "it was mixed," if not, "it was no chancre at all," but what we believe all chancroids are: *Simple venereal ulcers*.

It may not be amiss here to describe the sores which are not followed by syphilis and those which are. I will use term simple venereal ulcer for chancroid, and chancre for the specific, hard, or Hunterian lesion.

#### SIMPLE VENEREAL ULCER.

1. No period of incubation.
2. Originates from similar lesion or pus from bubo.
3. Multiple and confluent.
4. Auto-inoculable.
5. Begins as a vesico-pustule.
6. The lesion is an ulcer, deep, with sharply cut perpendicular walls or undermined, purulent base and secretion, and painful.
7. The hardness is around the lesion and is simply tissue infiltrated with inflammatory lymph.
8. The lymphatic glands are frequently inflamed, painful and possess a suppurative tendency. Bubo common.
9. Tendency to progressive ulceration and invasion of structure.

## CHANCERE.

1. Period of incubation 10-35 days.
2. Originates from chancre or secretion of secondary stages like mucus, saliva, or blood.
3. Single, perhaps never confluent, and rarely multiple.
4. Not auto-inoculable.
5. Is a simple erosion or a papule.
6. Lesion is saucer-shaped or hollowed out, superficial, almost clean base, very little if any secretion, and very little pus.
7. The hardness is limited to the lesion and is minute in size and suggestive of a small shot.
8. Lymphatic glands indurated, not very painful and free from active inflammatory processes.
9. Chancre is locally a lesion of little suffering and tends to spontaneously heal without treatment.

These characteristics, then, when typically present, offer no difficulty, but when exceptions rule what is to be done? Prominent schools advise absolutely opposite lines of procedure. One teaches that the immediate exhibition of antisyphilitics is a *sine qua non*, and any other plan unwarranted; the other promulgates the doctrine that to treat a patient with a doubtful lesion in any but an expectant plan is wrong. In the confused light we have of the course of syphilis this possesses much to recommend it.

What is the natural history, so to speak, of syphilis? A fact to which little attention seems to have been directed is, that in many instances, just as in any disease, cure occurs spontaneously. This is to be remembered. Again it is a prevalent belief that mercury possesses the power to modify or even prevent the appearance of secondary phenomena, and, consequently, the so-called tertiary sequela are also averted. In strong contrast with this exists the indisputable fact that very frequently while a patient with chancre is taking mercury secondary phenomena occur. It is true sometimes a little late. A sect of syphilographers teaches that mercury aggravates the after developments and imperatively demands the utter abandonment of the drug. Another sect holds a contrary opinion. How is this prominent face-to-face contradiction of therapeutics explained? If the method of treatment be examined the answer is contained in this statement of Zeissl: "It is true if an individual suffering from an early syphilitic eruption is subjected at once to mercurial treatment, the symp-

toms existing at the time usually disappear very rapidly, but the syphilitic diathesis remains, and is manifested particularly by hyperplastic lymphatic glands." It will be noticed, however, that among one hundred individuals treated in this way 96 on the average will be attacked by relapses-sooner or later. In those individuals who have received mercurials internally or hypodermically at the first appearance of a syphilitic eruption, the relapses occur as often as after early inunctions. Opaline patches on the mucous membrane of the tongue, mouth and pharynx, occur with special frequency after the internal or hypodermic administration of corrosive sublimate.

If we make a résumé of these facts, it appears that mercury when given in the earliest phases of syphilis, causes a very rapid disappearance of the morbid symptoms, but that relapses occur more frequently than after other methods. I would also call attention to this: "The favorable results which may be attributed to mercury, are, that it usually causes more rapid disappearance of the symptoms of syphilis than other specifics, and that, when it is used two or three months after infection, and the disease has had time to exhaust itself somewhat, very small doses suffice to cause the disappearance of the symptoms." As a matter of course, it cannot be foretold whether such recovery is permanent. But we must ask, in the light of the knowledge we possess of the natural course of syphilis, whether two or three months' exhibition of mercury is the kind of therapeutics upon which it is proper to base or formulate a principle? It seems that no argument is demanded. So much for the anti-mercurialists.

A few words in conclusion regarding the diagnosis of the initial lesion. It is evident that we have to deal with two, and only two, lesions in our diagnosis. When the above characteristics of chancre are typically developed there is no difficulty, and we cannot be in doubt as to the proper treatment. I believe in the cauterization of chancre for self-evident reasons. It satisfies the patient and reduces the chances of further infection and enables a line of treatment to be described. As mercury in my opinion is, as a rule, the specific to be employed, and as this remedy does not invariably prevent the manifestations of secondary phenomena, and as in many instances the diagnosis of the initial lesion is obscure, it is a rule with me to not administer the drug until constitutional manifestations occur. By this plan the condition of the patient is not permitted



to be worse than it would be, if mercury be given immediately. I refer here to cases where the diagnosis is certain, for where there is doubt there should never be instituted specific treatment. Again, where diagnosis is certain, the clinical fact that secondary phenomena are an index of the future course of the disease, and that mercury modifies, while it does not prevent these, it is just as imperative to know the type with which we are to deal as it is to know the type of pneumonia or typhoid fever. This is the more important as the treatment is entirely too routine; so much so that it can be said with a great degree of truth that the treatment of syphilis is the exhibition of a standard mixture of iodide of potassium and bichloride of mercury or one-fourth to one-half grain doses of iodide of mercury, no matter what the mildness or severity of phenomena may be, or structures involved. It is just as reasonable to institute the most active measures in vogue for any disease because an initial sign or symptom was present as to blindly exhibit mercury in case of chancre. Who would introduce a Dwyer tube or perform a tracheotomy upon the earliest manifestation of a diphtheria? Is the one more inconsistent than the other?

What are some of the advantages gained by waiting until secondaries occur? First, we have some chancres not followed by constitutional phenomena at all; just as some people experience a sore throat in a scarlatinous room yet enjoy immunity from constitutional involvement. Second, a rash occurring within seven weeks indicates severity and places the physician on guard. Third, the rash occurring on time, its profuseness and type indicate a greater or lesser dyscrasia or tertiary future, and in my experience demonstrates the necessity of early instituting those remedies which we usually employ in the tertiary stage. Fourth, a late appearing rash is indicative of a mild after-course, this, like the preceding, being greater or less according to profuseness and type.

#### LETTERS FROM SPECIAL CORRESPONDENTS.

PARIS LETTER.

#### SURGICAL INTERVENTION IN DISEASES OF THE NERVE-CENTERS.

PARIS, April 10th, 1891.

The Fifth French Congress of Surgery

has just completed its work. It was held in Paris between March 30 and April 4, a great many eminent surgeons from every country being present.

The first question which had been given out last year as a subject for discussion was on "Surgical Intervention in Diseases of the Nerve-Centers."

Prof. V. Horsley, from London, who is well known to the medical profession for his works in that line, was to open the discussion, but, at the last moment, he was kept away and had his paper read by his assistant, Dr. Boyce. The principle part of the paper referred to the surgical method used, which consisted of opening the cranium by means of a very large trephine; the cutaneous flap is very large; and, the opening in the bone is also made large. The way in which the cranial section is made is as follows: A trephine is applied until it reaches to about the middle of the depth of the portion of bone to be removed; and from the center of this portion a smaller disk of bone is removed, the remaining bone up to the limit indicated by the first cut is removed with bone forceps.

When the convulsions are limited to a certain portion of the body, it is comparatively easy to localize the seat of the trouble and the part where we are to interfere. If, however, this is not ascertained accurately, when the brain is exposed in the suspected region, the exact part may be found by the application of an electric current.

As regards the medical treatment of corical tumors, Dr. Horsley says that one ought never to use specific treatment longer than six weeks; if, after such a time, the case does not improve, it is a clear case for operation; for even after a simple exploratory trephining, the cessation of the cerebral compression may be enough to effect a cure, as has been observed in several cases.

Prof. Lannelongue, of Paris, read a paper on the "Treatment of Microcephalous by Craniectomy," he gave the result of 25 operations performed by himself. He called attention, first, to the fact, that in microcephalous patients, one finds an advanced state of the union of the sutures and narrowness of the fontanelles. In microcephalic patients ossification of the fontanelles is anticipated. The affections which can be benefited by craniectomy, according to Dr. Lannelongue, are numerous. Obstetrical compression, in hæmatoma, circumscribed pachymeningitis, serous cysts, etc., in hydrocephalous hyperostosis of hereditary syphilitic origin—again, in diseases of the brain-sub-

stance itself, in cerebral atrophy of vascular origin, in diffuse sclerosis, etc.

Two kinds of operations are recommended by the author: 1st, linear craniectomy; 2d, flap craniectomy.

The first one is made along the superior longitudinal sinus and can be extended through the coronal suture, on the motor or Rolandic zone, towards Broca's center; he has also practiced it on the occipital behind, between the lateral sinus and the occipitoparietal suture; again, he has performed a transversal and symmetrical craniectomy on the frontal bone by detaching the longitudinal sinus.

By flap craniectomy, he means that operation which consists in making sections of the cranium combined so as to allow the flaps to remain adherent by a more or less extensive bony base. Sometimes the flap involves only one bone—the frontal, or the parietal; more often it extends over two bones—the frontal and parietal. The gap between the cut surfaces varies from 8 to 12 millimeters. The operation is performed by attacking the bone with a trephine, at one of the extremities of the wound, and then doing the rest with cutting forceps. The dura mater can be left untouched; if, however, there exists any trace of pachymeningitis, it would be well to puncture it or even to open it freely; if, however, an incision has been made in the dura mater, this membrane must be sutured, which is not necessary if only punctures have been made. As to the periosteum, it can be excised or not; both have been done, with no advantage one over the other. As to the final results—out of 25 craniectomies, he has had one death in 48 hours from acute septicæmia and continuous flowing of the cerebro-spinal fluid. The youngest child operated on was 8 months old, and the oldest 12½ years—as to the after-results, they were all benefited by the operation.

Dr. Anger, of Paris, also reported a case of craniectomy which was performed on a child 8 years old, who was taken, when 16 months old, with severe convulsions, occurring in the evening, and her intelligence seemed to cease developing. In fact she was at the time of the operation, so far as intelligence was concerned as little advanced as any 15 months child and did not even know her alphabet; she repeated words without understanding them; she said papa and mamma; she had no idea of danger and had several times fallen out of a window. The operation was made as follows: A linear incision was carried from

the frontal eminence to the lambdoid suture; a first disk of bone was removed, and the cranial excision was then continued for 12 centimeters (4 inches); the dura mater being prominent, a puncture was made with a hypodermic needle. The osseous wound was then enlarged, and when finished had an oval form of 11½ centimeters long (4 inches) antero-posteriorly, and 4 centimeters (1½ inch) transversely. The skin was finally united.

The day following the operation, the patient ceased to urinate or defecate in bed; she asked to eat; she began to cry when any one spoke of her absent parents; the athetose movements which existed ceased; and, finally, she has been improving steadily, both physically and intellectually up to date.

Dr. Girard presented an interesting case of Essential or Idiopathic Epilepsy, cured by trephining. The patient, aged 29, had been suffering from epileptic fits, five or six a day, ever since the age of 14. At 29, in a fit of anger, she shot herself in the right temple, and fell in a state of coma; the left arm was completely paralyzed. She was trephined, several pieces of bone and the bullet were removed and the skin again closed. It is now five months since the operation, and the patient has not had a single fit. She had before her operation six children, five of them having died from convulsions.

Dr. Duret, from Lille, also presented two cases of trephining. One was for aphasia of traumatic origin, the patient having fallen on his head. On trephining, a large clot was found in the Rolandic region, and removed; the patient was soon able to speak again, but unfortunately on the 23d day after the operation, after a rather copious alcoholic dissipation, he was attacked by severe cerebral congestion, with convulsions of the four extremities, from which he never recovered.

The second case was that of a young soldier of 22, who had had a fall at 14, and was subject to epilepsy. Trephining exposed a diseased arachnoid membrane in the parietal region. The epileptiform attacks, the headache, and vertigo ceased after this operation.

Dr. Jeannel, from Toulouse, reported a case of trephining for Jacksonian epilepsy. The patient had suddenly been seized a year ago, by an attack of apoplexy which left behind it a palsy of the right upper extremity. Two months later he had another attack, followed by spasmodic move-

ments of the right upper extremity; sometimes these would extend to the face and to the lower extremity, but still there was a continuous spasmodic agitation of the right forearm. There was also more or less complete aphasia. On the left side of the cranium no depression could be found. A small cicatrix existed, however, which was the result of a punctured wound made at the age of 15, but the cicatrix was not adherent. The cranium was opened in the Rolandic region on that side. When opened Dr. Jeannel found a violet, flabby mass which was firmly united with the cerebral substance, and extended downwards and backwards, so that the bony opening had to be enlarged. This diseased mass was curetted out and a hole, the size of a green almond, was left in the cerebral substance. The periosteum and skin were then united.

The day following the operation, all spasmodic movements had disappeared, but were replaced by a paralysis of the right forearm; the speech returned very slowly; no more epileptic fits occurred.

Dr. Regnier, of Paris, presented also a case of trephining for Jacksonian epilepsy. The case is an interesting one, as Prof. Charcot had given the following diagnosis: Partial sensitive-motor epilepsy, corresponding to a probable lesion at the middle and inferior regions of the Rolandic convolutions.

At the age of 5, the patient had been taken with a sensation of pricking on all the mucous membranes of her head and an abundant lachrymal secretion. In 1888, she fell several times on her head, and one finds to-day a cicatrix in the left parietal region. In April, 1889, she had her first attack; her mouth was strongly twisted to the right four or five times a day. Convulsions extended to the head more than to the arms and lower extremities.

The operation of trephining was resorted to. A disk was removed from over the Rolandic region and the opening enlarged, when the surgeon found a gray-colored tumor, of cystic appearance, extending down into the cerebral substance. This extended further forward than the margin of the bony section, so that after having scraped out as much as possible of its superficial portion, the wound was closed. The fits, however, returned again, so that a new operation had to be performed 4 months later. It was then found that the tumor had already re-formed itself, and it was again enucleated with the curette; the tumor was a glioma with a central cystic cavity, and it was situated at the

inferior extremity of the ascending frontal convolution and the lower end of the third frontal convolution.

Dr. Michaux, of Paris, presented a case of trephining for non-traumatic meningeal hemorrhage. The patient was an habitual absinthe drinker and had been so for years. He was brought to the hospital in a complete state of apoplexy, with left facial palsy and paralysis of the right upper extremity. The following days the paralysis extended to the right inferior extremity; epileptiform convulsions occurred, etc. In addition, the patient did not present the least sign of external traumatism.

The patient was trephined over the Rolandic region on the left side; three disks of bone were removed, making an opening of 2 inches long. The dura mater was next incised and this allowed several large black clots to escape—the quantity of two table-spoonfuls. The symptoms gradually disappeared, excepting those connected with speech, which has remained slightly defective even five months after the operation.

This was a clear case of spontaneous hemorrhage of alcoholic or uræmic origin cured by trephining.

Dr. Picqué, of Paris, reported another case of trephining. It was in a young lady, aged 19, who shot herself with a revolver. She was in a comatose state for five days and then gradually and completely recovered her mental faculties. The attending physician said there was no penetration, yet there was a wound at a point between the right frontal region and the corresponding temporal, a little in front of the coronal suture. The patient complaining of persistent headache on the right side, the diagnosis of cerebral abscess was made, hence trephining was resorted to. The cerebral surface appeared intact, except at one part, where the gray substance protruded. An incision brought out a great deal of pus, but the bullet could not be found. To-day the patient has completely recovered and is doing very well.

Dr. Broca, from Paris, presented three cases. On one of his patients, there was an indication of localization: an athetose movement of the upper extremity; yet in that case the author concluded at once that the cortical center of the upper extremity ought to be exposed, for according to the history of the disease and the form of the head of the patient, he has diagnosed intra-ventricular hydrocephalus, hence the first surgical indication was the removal of part of this liquid, so as to diminish the compression of the brain. He, therefore,



opened and drained the left lateral ventricle, using Keen's process of trephining one inch behind and above the external auditory meatus.

His second case was an infantile spasmodic brachial monoplegia. The athetose contractions of the left upper extremity resembled the preceding patient's condition, but the history of the disease, as well as the form of the head, pointed to infantile cerebral sclerosis. In addition, for the past four years, the patient had had fits of Jacksonian epilepsy starting from the thumb.

On trephining, a cyst was found on the motor center for the thumb, at the postero-inferior portion of the center of the upper extremity. The epileptic fits have not completely ceased.

Finally, the third case was one of compound fracture, for which the patient had already been trephined and a small abscess found; the operative result was good, but a few months later the patient returned with a Jacksonian epilepsy of the lower maxilla and left upper extremity, presenting a small cranial fistula. Thinking that a small piece of bone might be the source of irritation, this was removed, with great improvement in the patient's condition.

Prof. Verneuil, of Paris, made an interesting communication on a case of "Fistula of the Sacral Region with escape of Cerebro-spinal Fluid." The young lady had noticed sixteen months before she presented herself at Dr. Verneuil's consultation, that a small tumor appeared in the sacral region, about the size of a small orange, which tumor burst spontaneously four months later, allowing a great quantity of pus to escape. Dr. Verneuil thinking that a sequestrum was the cause of the suppuration, operated with the thermo-cautery, but when he reached the supposed diseased bone, he found that his finger came in contact with one of the posterior sacral foramina, the borders of which appearing roughened were thoroughly scraped. The day after the operation the patient was found drenched in her dressings, this liquid examined and demonstrated to be cerebro-spinal fluid. Four days after the operation and this over-flowing, the patient was found in a state of deep coma and dyspnea, but without fever or vomiting. These comatose states had occurred before whenever the abscess opened. The patient is today cured. The lesion was of bony origin, producing acute abscess, the dura mater having been perforated in one of the sacral foramina, from which occurred the escape of the arachnoid fluid.

Dr. Bazy, of Paris, also made a communication on exploratory surgical interference in cases of compression of the spinal cord, or in cases of uncertain diagnosis. He reported the case of a woman on whom he operated for symptoms which were ascribed to a probable tumor of the cord; the spinal canal was opened in the ruptured region, but with negative results; the wound healed without the least trouble. A. C. H.

## SOCIETY REPORTS.

### GYNCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

Dr. Neale reported the following case of "OCCLUSION OF THE OS UTERI DURING FOUR DAYS' PARTURITION:"

Mrs. K. W., æt. 26 years; white. Past history unimportant. Last menstruation early part of April, 1890. Pregnancy normal up to Nov. 16th, 1890, when she slipped and fell violently on her right side on the sidewalk. There was no vaginal discharge at the time and no discomfort except from the jar, bruising, etc., and the patient was up and about all the time. No movements of the child were felt after the fall.

About Christmas, 1890, an offensive yellowish vaginal (uterine) discharge occurred and continued for one week.

On the night of January 12th, 1891, her first labor pains began, and were so severe as to require morphine being given by her attendant. There was no "show" or discharge of any kind. The pains increased and the patient was suffering severely when I saw her for the first time, Friday evening, January 18th, 1891. She was a large well-built and well-nourished woman.

I could not distinctly map out the child by abdominal palpation. By auscultation gurgling was detected over the entire uterine tumor, but not a trace of fetal heart sounds could be heard.

By vaginal examination; the vagina was very short and small, there was no cervix and no os. A continuous layer of mucus membrane, flush with the vaginal walls, closed over the entire vault of the vagina, and a little dimple in its center was the only indication of where the os ought to be.

The patient was chloroformed, placed in position, the hand passed into vagina, the finger pressed firmly against the dimple when it suddenly yielded or burst open like a membranous web, permitting a gush of a

not foul smelling bloody water to escape, and at once the rapidly enlarging outlines of the os could be felt, then about as wide as a silver half-dollar piece. The soft bagging scalp and loose cranial bones came down upon the enlarging os and as the expulsive efforts were almost nil, I grasped the head with a Simpson's cranioclast which tore away, and then adjusted the blades of a Tarnier basiotribe over the head and neck and a thoroughly macerated, but not decomposed or foul, small child was easily extracted. The perineum was intact, and the os fissured slightly. A small placenta appeared within six minutes. There was considerable post-partum hemorrhage, the uterus acting feebly. The os remained open about size of silver-half dollar piece, with thick edges; the uterus was rather small but not firmly contracted. Two quarts of a hot intra-uterine 1-4000 bichloride douche were injected. The patient rallied well and debarring an occasional slight rise of pulse and temperature, and faintly fetid lochia which readily yielded to the antiseptic douche, the puerperum was uneventful and recovery complete. This case was a novel one to me. I am quite sure the membrane I felt was mucus, and not the amniotic sac, nor do I think the case should be classed among those of cervical occlusions or stenosis from endotrachelitis.

Dr. J. Whitridge Williams read a paper on

"THE INDUCTION OF PREMATURE LABOR IN CONTRACTED Pelves."

He pointed out that the comparative neglect of the operation in this country was due to two causes; the absence of large lying-in institutions and the consequent lack of large amounts of clinical material, and the almost total neglect of pelvic measurement.

By the term induction of premature labor, one understands the artificial interruption of pregnancy at such a period that a viable child may be born; that is, at any period from the 28th or 30th week to the end of pregnancy.

Dr. W. after a discourse on the history of the operation, showed that it was first rationally employed for this indication in England, as the result of a conference of the eminent physicians of London in the year 1756. Within fifty years it was quite generally employed on the Continent, and soon enjoyed a popularity which caused it to be resorted to on the most trifling pretexts, and

which in 1869 called forth Spiegelberg's forcible denunciation of the operation by which he showed that the mortality, both of the mother and children, was nearly three times greater after the operation than if the woman went on to term.

This was soon followed by articles by Litzmann and Dohrn, who showed that Spiegelberg had painted the picture in colors far too dark. Litzmann showed that in moderate degrees of contraction, 8.25-7.5 cm. (3½-3 in.) the operation was indicated in the interests of the mother, as shown by a mortality of 7.4 per cent. after the operation compared with one of 18.7 per cent. when the woman was allowed to go on to term. Dohrn stated that the proper method of appreciating what the operation accomplished, was not to compare so many cases of induced labor with so many cases of labor at term, but to compare the results of premature and spontaneous labors in the same woman; by this method he found that twice as many children were saved by inducing labor as by allowing the woman to go on to term. Consequently, they proved that the operation was indicated in properly selected cases both in the interests of the mother and child. The introduction of antiseptic methods into midwifery, almost completely robbed the operation of danger for the mother, as will be readily seen from the following statistics. Thus Haidlen reports forty-four cases from the Stuttgart clinic, with no material deaths and 72 per cent. of the children saved. In 1889 Korn stated that Leopold lost one woman in forty-five cases and saved 66 per cent. of the children, and last July Ahlfeld stated that he had induced labor one hundred and eighteen times with the loss of only one mother, and had saved 62 per cent. of the children. At the Berlin Congress, Fehling stated that in sixty cases he had saved all the mothers and 80 per cent. of the children.

From the above sketch we will readily see that the maternal mortality in properly selected cases is very slight. Four hundred and one cases collected by Korn, showing a maternal mortality of only 2.9 per cent., or just a trifle more than normal labor in a normal pelvis, while the fetal mortality ranges from 20 to 70 per cent., the average being about 33½ per cent. So in this operation we have a means of saving about two-thirds of the children without any risk of the mother. On reckoning by Dohrn's method we save at least twice as many children as if we allowed the woman to go on to

term, and then resorted to some conservative operation.

These are the prospects of the operation, but unfortunately the degree of contraction within which the operation is justifiable is very limited, and one can only think of it in moderate degrees of contraction. According to Litzmann, in flattened pelvis with a conjugata vera of 6.5-8.25 cm. (3-3.25 in.); and to Schroeder, 6.5-9.5 cm. (2.5-3.75 in.). As pelvis with a conjugata vera above 8½ cm. (3¼ in.) offer a reasonable chance to both child and mother at term, and those below 7 cm. (2¾ in.) offer no chance to the child, I think that the operation should be restricted to these limits; that is between 7-8½ cm. (2¾-3¼ in.) in simple flattened pelvis. In the justo-minor pelvis a conjugata of 9½ cm. (3¾ in.) or less will usually be an indication for the operation. In the rare forms of obliquely narrowed pelvis, whatever the cause, we must be guided almost entirely by the history of previous labors.

We thus have the operations restricted to a very small range, 1½ cm. (½ in.), which should only be exceeded when the previous history tells us that the previous labors have all ended disastrously. We should not think of inducing labor in a flattened pelvis with a conjugata below 7 cm's. (2¾ in.) for in that case the prospects for the child are almost *nil* and the dangers to the mother greatly increased. Here we come to the relative indication for Caesarian section, when it is best to allow the woman to go on to term, and attempt to save both mother and child by that operation.

With these contracted indications, we readily see that an accurate idea as to the exact size and form of the pelvis is an absolute prerequisite for the performance of the operation; and the only means by which we can accurately obtain this information is by carefully measuring the pelvis. We should not content ourselves with simply measuring the conjugata vera, but should also take the external measurements and thereby attempt to determine with what form of pelvis we have to deal. After doing that, we must carefully examine the interior of the pelvis to determine its height; to see if it is generally contracted, and if contracted, if the contraction increases as we approach the outlet, we must look for exostoses of the pelvic bones and carefully examine the promontory to see if it is double or not. If we think the pelvis contracted laterally we should measure the distance between the tubera ischiorum on each side, as Breisky

recommended. We should also attempt to estimate the transverse diameter of the pelvis, which is most difficult to do, and the most that can be expected is to examine alternately with each hand and try to stroke the linea innominata and so relatively to get some idea as to the transverse diameter.

Having decided that an operation is necessary, the next question is, when shall it be done? Of course, the younger the fœtus, the smaller will be its size, and consequently the easier its delivery. But, unfortunately, the smaller the fœtus, the less chance will it have of living even if it survive the operation. Generally speaking, we say a child is viable after the twenty-eighth week, but its chances of living are almost *nil*; indeed children 30-32 weeks old have next to no chances of living. The later the operation, the more chances has the fœtus of living after it, but unfortunately its size and consequently the difficulty of its delivery increase with its age. If possible, the operation should be done about the 34th-36th week, our object being to operate at the latest possible period consistent with safe delivery. To fulfill this object we must attempt to gain an accurate knowledge as to the size of the child's head. Unfortunately, we are unable to determine its size with mathematical precision or even with the relative precision of pelvimetry; so we are obliged to take advantage of every possible hint on the subject. Some of the following points may be of assistance in different cases. We must consider the mother's account as to the duration of the pregnancy.

Notice the size of the parents, large parents usually having large children. Inquire about the previous labors, particularly as to the size of the head. Endeavor to estimate the size of the head by abdominal and combined abdominal and vaginal palpation; and note the consistency and amount of resistance to compression that the bones of the head offer. Try to measure the head with the pelvimeter through the abdominal walls, and deduct the estimated thickness of the abdominal walls from the result. Notice the size of the large anterior fontanelle, average width 2 cm.; the width of the sutures; and the distance from the anterior to the posterior fontanelle; for as they are larger or smaller, it indicates a larger or smaller head. Measure the length of the fœtus as it lies in utero, from breech to vertex, double the measurement and it gives, according to Ahlfeld, the length of the fœtus. If a foot is prolapsed, measure it, for Gœnner stated that there is a difference of nearly one centi-



meter between the length of the foot at term and one at thirty-two-thirty-four weeks.

One of the most important methods is that of Mueller who attempts to force the head down into the pelvis by pressure from above. As long as he is able to force the head down, he knows that labor will readily take place, but when he can no longer force the head down and when it bulges out over the symphysis, then he considers that the time for operation has arrived. As the great danger to the mother is from sepsis, one cannot be too careful in one's efforts to guard against it, and consequently one should be most particular in one's preparation for the operation. For several days previous to operating, the woman should have a warm bath daily; and several times a day be douché with warm water, 95-98 F., containing salt or borax, by which the cervix is softened and dilated. Just before operating, the genitals should be most carefully washed with hot water and soap, followed by a 1-1,000 bichloride solution; the vagina should also be most carefully cleansed.

The hands of the operator should be washed for at least ten minutes in hot water and the nail-brush vigorously used, after which they should be placed for several minutes in a 1-5,000 bichloride solution. All instruments should be sterilized by steam or placed in a 5 per cent. solution of carbolic acid for at least thirty minutes.

The most generally approved method is that of Krause or the introduction of a disinfected flexible bougie between the membranes and the uterine wall. If properly conducted it is almost entirely devoid of danger for the mother, and will bring about the birth of the child in a period varying from 8-241 hours, averaging about eighty hours or about three days. To insert the bougie, the woman is placed on her back or side as may be convenient, and the cervix brought down by a pair of bullet forceps and the cervical canal carefully cleansed with bichloride on a pledget of cotton; the bougie is then carefully inserted so that its lower end is within the vagina, care being taken not to wound the membranes or the placenta. Then the vagina is packed with iodoform gauze, which serves to hold the bougie in place. If at the end of twenty-four hours no labor pains have been produced, the bougie should be removed and another introduced at another point under the same precautions as the first. If this method fail we may resort to Kiwisch's method of allowing a current of hot water, 100-110 F., to flow through the vagina sev-

eral times a day for a period of 5-15 minutes. Or we may puncture the membranes, as accessory to these, we may loosen the membranes about their lower pole; tampon the vagina with iodoform gauze or employ Barnes' bags. If the pains are weak, Fehling recommends a version by Hick's method and bring down one leg, whereby increased contraction is produced and one is afforded a ready means of ending the labor if one deems it expedient in the interests of the mother or child.

DR. NEALE: I regard the chief point in this very able paper to be the endeavor to definitely fix the limits for the induction of premature labor in contracted pelves, not as opposed to Caesarian section, but as applicable to a distinct and separate class of cases. This endeavor I strongly advocate, but at the same time must confess that I do not believe the plan is always practicable at the bed-side. There are so many factors entering into the determination of this question as stated in my paper, that I can now only repeat what I there quoted, viz.: "A given pelvic measurement is useful as an indication of what has been the experience of others under similar circumstances, but is not a final ground for decision." After the evidence adduced, which doubtless represents the opinion of the best medical authorities, I am sure I only voice the concurrence of this society in accepting the limits for this operation as stated by Dr. Williams. This is practically in accordance with the teachings of Lusk—probably our strongest American authority—who places the range for the induction of premature labor in contracted pelves at a conjugate vera of from 2½ inches (7 cm.) to 3½ inches (8.75 cm.).

DR. KELLY: The subject is too large to be discussed formally. What we want to know for practical purposes is, whether the children live any time after they get home. My own experience is but few live. If they are sent out simply to die soon after at home, the induction of premature labor among the poorer classes simply becomes a species of uterine gymnastics.

A method of my own which I have found most successful in inducing premature labor, is taking a flexible whalebone bougie, introducing it between the membranes and the uterine wall, high up into the uterus, and sweeping it gently around for one or two inches in either direction. This has not failed me in any instance in bringing on labor.—*Journal of Gynecology.*

# THE MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

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## THE MEDICAL AND SURGICAL REPORTER.

With the present number the editorial management passes into other hands.

For nearly 40 years the REPORTER has held an exalted position among medical periodicals. The liberal policy which has always characterized its management, the high class of material which has filled its pages, its unqualified and unselfish devotion to the highest interests of the profession, its large and disseminated list of readers both in this country and abroad, and its long list of subscribers who have continued to read it almost since its very inception, give it a place almost unique.

In the future, as in the past, the same broad, liberal, and progressive policy will be pursued; quality alone will determine the admission of articles to its pages; it

owes no allegiance to any school or faction; it is pledged for higher medical education and for legal enactment to prevent the incompetent from practicing medicine.

Notwithstanding the commanding position attained by the REPORTER we are not satisfied to let well enough alone and thus sow the seed of early decay. Therefore, with the promised co-operation of a large number of the most prominent writers in this country and Europe, with the assurance of the continued liberal support of our old contributors and subscribers; and having accomplished important changes in the present number, and with others in view in various directions in the literary and typographical make-up of the REPORTER, we are confident the journal will be more welcome than ever, and its patronage and influence greatly increased.

In these busy days when every moment is preyed upon and when thousands of presses are offering us the results of an ever-increasing amount of observation, it becomes a necessity that for the practitioner to keep abreast of the times the essential part of this mass of work should be so condensed and arranged that "he who runs may read." With an increase of the size of the REPORTER from 28 to 40 pages of reading matter, and with the aid of a competent corps of assistants we hope to keep our readers posted in all important progress in medical science and art. To this end our editorial columns will be devoted to Leading Articles which will consist largely of short critical résumés of the more important and recent advances. The Periscope will also be modified—it will follow the editorial columns, and the abstracts will be arranged collectively for ready reference according to the special departments in medicine to which they belong.

The REPORTER has always been pre-eminently a journal for the practicing physician, and we will spare no effort to keep it so; but while the practical will always be foremost in view we will endeavor to neglect nothing which promises to be of value to the clinician or which is of special interest to the profession.

Space does not permit us to offer in detail what we have done or intend to do, but it is hoped that these few statements will be sufficient to indicate our position, and our determination to secure the best material to be had and keep our readers thoroughly informed in a concise and practical way of medical progress.

We ask the indulgence of our readers for any shortcomings in the present number. Owing to a misunderstanding with our predecessor, our task was one of exceptional difficulty.

As we are going to press, it is announced that Dr. Joseph Leidy, the eminent naturalist and Professor of Anatomy in the University of Pennsylvania, is lying critically ill, and it is not likely that he will live twenty-four hours.

#### THE DANGERS OF COCAINE.

The rapid accumulation of cases in which alarming symptoms followed the local application of small quantities of cocaine, together with the fact that these untoward effects are due to individual idiosyncrasy and do not invariably occur immediately, is a positive warning to the profession that this powerful substance should not be used in any case for the first time without proper antidotes directly at hand and the patient kept under surveillance for at least a half hour. We will not attempt to refer to the cases published in which ordinary therapeutic doses administered internally or subcutaneously caused symptoms similarly embarrassing.

Nearly three years ago, Satterwhite, as a result of a study of one hundred cases of poisoning by this alkaloid, called attention to the dangers attending the use of even very small doses, and at about the same time another author after summarizing the records of fifty cases made a similar announcement. That this warning was well founded is evident by succeeding publications. A case is reported by Broughton in which unconsciousness; an irregular, slow respiration; and a slow pulse, followed the application of

three minims of a twenty per cent. solution within the cavity of a tooth. Whistler, after the application of a four per cent. solution to the nasal cavity, noted vertigo and threatening syncope. In a case of glossitis, Ricket states, that the patient became moribund after the use of a similar solution. Myrtyle dropped three minims of a three per cent. solution in each eye, which immediately caused a sense of numbness in the back of the tongue and throat, palpitation, threatened syncope and nausea. Bettelheim records that in one case the hypodermatic injection of one-sixth of a grain induced alarming symptoms; and in another, one-eighth of a grain similarly injected caused unconsciousness, congestion of the face, irregular breathing and trismus. Cotter found unpleasant symptoms in more than one instance while using in the nasal cavities a solution as weak as ten per cent. Thus, in a young lady there was sprayed into these fossæ six or seven minims of a ten per cent. solution, and just as he was going to operate, the breathing became very difficult, the larynx seemed paralysed, distressing symptoms of cardiac and general depression appeared, and she was unable to walk for two hours. Hübner dropped about one and a half minims of a two per cent. solution into the nostril of a healthy young soldier previous to the removal of a polypus. This was soon followed by unconsciousness, an exceedingly weak pulse and cold skin. A case is reported by Ficano of a woman, forty-three years of age, who had for some time suffered from intolerable tinnitus, which accompanied a dry otitis media, with a diminution of hearing. A few drops of a five per cent. solution were introduced into the middle ear by means of a catheter, after the use of the Politzer method of insufflation. In a short time vomiting came on with cramps and diarrhoea which lasted for several hours, there was marked muscular inco-ordination, and symptoms generally analogous to those of sea-sickness.

There seems to be no doubt that cocaine is absorbed with extraordinary rapidity, and that the stronger the solution which is



locally applied the greater the danger of toxic symptoms, but whether the latter are to be attributed merely to the larger dose or to some obscure action is not apparent. Falk has found that the rapidity of absorption varies in the different tissues—absorption taking place most rapidly through the conjunctiva, then in the following order: nose, larynx, mouth and ear. It is generally conceded that a ten per cent. solution is sufficiently strong for most purposes and robbed of many of the dangers of those of greater strength.

The nature of the toxæmic symptoms varies so greatly that no rule-o'-thumb treatment can be set down: in some cases nervous and muscular excitement predominates; in others, respiration in the function most seriously affected; in others, the circulation, etc. Among the agents found useful are nitrite of amyl, strychnine, atropine, morphine, alcohol, ammonia, digitalis, chloral, seraprisms over the heart and stomach, hot drinks and artificial respiration.

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### PERISCOPE.

#### THERAPEUTICS.

##### THE EMPLOYMENT OF NAPHTHALINE IN THE TREATMENT OF TYPHOID FEVER.

Natanson (*Rev. Gen. de Clin. et de Therap.*, March 11, 1891) has communicated to the *Société de Médecine Pratique* the results of his experience in the treatment of typhoid fever by naphthaline. He has employed the drug in 23 cases, and at different periods of the malady. The temperature and the diarrhoea were diminished within two or three days. The remedy was given daily three or four times, in doses of 15 centigrammes for adults, and 10 centigrammes for children. In order to continue the use of the medicament the stools and the urine should be carefully examined. The disappearance from the stools of the microbes, shows the success of the treatment; but a greenish coloration of the urine is a sufficient cause for the suspension of the drug. The remedy may be given in gelatine capsules or in water. To this treatment may be added as auxiliary, other tonic measures, such, especially, as cold-water baths. The healthy condition of the kidneys must be watched in order to avoid toxic phenomena.

##### HYPOSULPHITE OF SODIUM AND SILVER IN ATAXIA.

Dr. A. Radcliffe in the *Therapeutic Gazette* writes: Having a case of locomotor ataxia to treat, and fearing the danger of argyria from the nitrate of silver, I was induced to use the hyposulphate of sodium and silver, thiosulphate of sodium and silver, from a report published by Curci, in the *Medical News*, July 10, 1886, wherein it was claimed this double salt "did not coagulate the albuminoids, is very soluble in water, is not caustic, is diffusible, promptly absorbed by mucous membrane and connective tissue. Its taste is sweet, slightly nauseous. Should be given fasting or hypodermically, by mouth from 5 to 20 centigrammes daily, or hypodermically from 1 to 5 centigrammes daily. Its action is quickly obtained; the danger of argyria is avoided."

My patient was a lady, past middle life, and her trouble had been slow in coming on. The electric-like pains had been treated as neuralgia and rheumatism; the gastric trouble, as dyspepsia, with pepsin and nux vomica; while the difficulty in locomotion

tion was attributed to the rheumatism. She came under my care early in 1886. The first symptom she then complained of was the difficulty she had just experienced in coming up the stairs, owing to the darkness, and some stiffness in her limbs. Though she could walk from her house to the gate at night with considerable certainty, as she was familiar with the locality, yet if she stepped off the walk she would be compelled to sit down, because on the ground she could not get her bearings; that if she did not get back on to the walk, she would be compelled to crawl to the house, for on the ground she felt an uncertainty about her equilibrium. She does not walk on her heels, bringing the sole down with a flap; she walks slightly bent forward, that she may watch where she steps, for a very small obstacle, if stepped upon, is sufficient to cause her to fall. Though she stands with her eyes closed, yet there is a slight swaying motion of the body, such a feeling that she might fall, she does not like to try it. She stands and walks wide; the foot is not carried directly forward with a good knee action, but is held rather stiff and swung around.

She took at first ergot, to relieve some spinal congestion that troubled her in the mornings. Belladonna, she thought, gave little relief to the bladder-trouble (paralysis of sphincter), and annoyed her by the dryness it caused in the mouth.

She has taken the sodium and silver salt at intervals since 1887, or earlier, as high as 15 centigrammes (2½ grains) a day, in all four or five drachms, and has lately commenced on another drachm. Soon after commencing the use of the silver salt her gait improved, and she walked with more ease and spring. She says the silver helped the pains in her limbs, that she could walk better after taking it, but it did not help her bladder-trouble.

Suspension, which she uses at home, she claims greatly helps the bladder-trouble; the only thing that ever did.

With the silver salt and suspension, she says, she can get along very well, if her household work is not too great; that without them she could hardly get along at all.

#### TREATMENT OF ERYSIPELAS BY ICHTHYOL.

An elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some

years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighborhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment, as compared with ordinary methods, are embodied in several instructive tables. From these it appears that, while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5.6 days.—*Lancet*.

#### ON THE ACTION OF ATROPINE IN DISEASES OF THE HEART.

Dr. Cardarelli has experimented with atropine in sixty-five cases of various forms of functional cardiac disease, measuring the pulse with the chromograph of Verdin and the arterial pressure with the sphygmomanometer of Basch. His conclusions, which appear to be based on a most careful study, are published in *La France Médicale*, January 23, 1891:

1. Atropine, in doses of  $\frac{1}{15}$  to  $\frac{1}{5}$  grain, given hypodermically in man, manifests itself first in its action on the heart.

2. The action of atropine on the heart consists in the overcoming to a greater or less degree of the inhibitory influence of the vagus nerve.

3. As a consequence of this paralyzing action on the vagus, there is constant acceleration of the cardiac rhythm, which may be in certain cases accompanied by a slight transitory slowing.

4. Arterial pressure is reduced under the influence of atropine in direct proportion to the acceleration of the rhythm.

The author concludes with the statement that, when a clinician cannot use atropine in slight forms of irritation of the pneumogastric, in which there is no slowing of the pulse, it will be, nevertheless, a great error not to prescribe atropine in cases where a

permanently slow pulse is accompanied by epileptiform vertigo, and, above all, by syncope.—*Therapeutic Gazette.*

#### ARISTOL IN DISEASES OF THE EYE.

Aristol has been employed successfully by A. Bourgeois (*Union Méd du Nord-Est*, Feby., 1891), in eye diseases, such as ulcers of the cornea, traumatic keratitis, and wounds caused by foreign bodies, or the extirpation of an epithelioma. In a case of corneal ulceration he recommends the following treatment:

- 1.—Instillations of cocaine between the eye-lids.
- 2.—Frequent washings of the conjunctival cul-de-sac with a 20 to 1000 solution of the biniodide of mercury.
- 3.—Instillation upon the cornea of a drop of eserine, to be followed by the local application of the powder of aristol.
- 4.—Corrosive sublimate, dressing and bandaging.

The indications for the use of aristol in ophthalmology, according to the author, are those connected with the drying up of supuration, or the cicatrization of wounds. The drug has advantages over iodoform as well as in infantile medicine.

#### DIGITALIS AND STRYCHNINE AS CIRCULATORY STIMULANTS.

Digitalis, caffeine, strophanthus, scoparius, and adonis vernalis constitute a most useful group of agents that exhibit an action upon the circulatory apparatus commonly spoken of as tonic or stimulant; but, when the physiological effects of these drugs are considered critically from the stand-point of their application to diseased states, it will be seen that their use is more limited than is generally supposed. The concomitant actions upon parts and functions of the organism, other than the heart and circulation possessed by each, frequently present a barrier to their employment, even where the circulatory symptoms would seem to indicate their prompt administration. The indications for the use of digitalis in heart affections are clearly understood, but the reasons for and against its use in many cases of a weakened and failing circulation do not appear to be as firmly established. This view of the question, together with strong arguments for the use of strychnine as a circulatory stimulant, form a basis of a valuable paper published by Dr. BRADPUTE (*New York Med. Journ.*, January 10, 1891), who, in the first place,

maintains that in the class of constitutional diseases, especially those characterized by a continuous high temperature, accompanied by any of the various forms of degenerative change in the organs and muscular system, digitalis is not the remedy, and where these changes affect markedly the cardiac structure it is conspicuously contra-indicated. The action of the drug upon the muscular fibre is one of stimulation, followed by an increase in its force power, and if the fibre is surrounded by, or contains within, its substance granules or particles of fatty change, it can be readily seen that the indications are for the relief of overwork, and not to compel it to do what it is already physically incapacitated to perform. For example, in typhoid fever the condition just outlined is always present, and the administration of digitalis in doses sufficient to produce even a slight physiological effect cannot fail to do harm; but that this fact is frequently overlooked, and by practitioners of eminence, there is ample evidence. In addition to the ugly action of digitalis upon diseased heart-tissue, its property of contracting the arterioles, causing a rise in the blood-pressure, increases the total amount of cardiac work necessary to be done, which is so injurious as to result sometimes in practically a paralysis of the entire organ,—a mishap that has occurred after a sudden change from the recumbent to the erect posture in instances of undue exhibition of the drug where there was no interference by disease with the normal function of the heart-fibre. Its influence upon the inhibitory centres also offers an obstacle to its use when the above-mentioned objections may not exist, and on account of this it is well to remember that, as a rule, subject to modifications attendant upon exceptional cases, a weak and slow heart is not amenable to the curative effects of digitalis; rather is it a weak and rapid heart that presents the most favorable opportunity for the display of its peculiar action. Phosphorus-poisoning, typhus and yellow fevers, atheroma, and fatty heart are affections presenting a pathological anatomy contra-indicating the employment of digitalis, especially in the last stages of these diseases. Aside from its use in simple heart-disease, unless very skillfully handled, digitalis is only effective in the failing circulation of hemorrhage, shock, and certain acute affections, especially when the cardiac movements are very rapid, where the result desired is a bracing up, as it were, of the general circulatory apparatus until nature has time to recover herself. In



shock following head injuries, when the heart is slow, nitro-glycerine is the better agent, as it paralyzes the inhibitory centres and dilates the arterioles, thus promoting the activity of the heart and increasing the rapidity of the blood current. But in these instances there are no degenerative changes in the heart muscle to negative violent stimulation of the fibre. In acute phthisis, accompanied by an irritative fever and a rapid and sometimes tumultuous heart, digitalis is often very useful, but it is manifestly unsafe to administer it in large doses. The Harveian lecturer of 1890 calls attention to the independence of the systemic and pulmonary circulations, which opens up a new field for the study of pulmonary therapeutics; and it may be that future experiments and observations may preclude the employment of many of the drugs now used in lung-affections; but, under our present knowledge, digitalis is an excellent remedy for the failing heart of continued pulmonary hemorrhage and the gray hepatization stage of pneumonia. In the latter, digitalis does good so long as the heart does not beat below the normal rate; when the pulse drops below 70, some other remedy must be given. In the first and second stages of pneumonia, when active inflammation is going on, digitalis is out of place, as it only causes the heart to pump more blood into an already surcharged area, and can have but little influence over the temperature. In myocarditis, where exudative material is poured out in and around the muscular substance, digitalis adds insult to injury, and the interference with function from the disease is only increased.

From these few remarks it can easily be seen that some of the contra-indications that may be present in disease prohibiting the use of the digitalis, or a remedy having a similar action, are congestion and inflammatory obstruction in the pulmonary structure; degenerative changes in the muscular system, including the heart; general interruption of the nutritive processes, with accumulation of serum in the tissue; sudden cardiac failure; and all conditions in which the heart-beats are less than normal. Of course, no iron-clad rules can be laid down; but if the drug is given in maladies characterized by any of the above-mentioned lesions, it must be used with great care.

In selecting a remedy to combat a failing circulation, all the structural changes and diminished or lost functions must be accurately studied and the influences resulting therefrom duly considered. Without the

intelligence accruing from such a consideration of a given case, it is impossible to apply a proper drug, no matter how well known is its action. A thorough knowledge of the normal physiological state of the patient, the pathological changes that have taken place, and the physiological action of the drug is essential to successful therapeutics, and in no instance is a familiarity with these three points more important than in a case of failing circulation.

In those protracted diseases in which this formidable symptom arises, the general condition of the patient may be summarized as follows: The muscular system is weak, flabby, degenerated, and ill nourished; the nervous system is reflexly disorganized; the nerve-conducting paths, chiefly at the periphery, are partially or entirely obstructed, so that tissue sensation and motility are interfered with and vaso-motor paresis is marked, thus checking normal physiological change in part or even in places completely; the secretory structures are either exhausted—not functioning—or their products are unfit for use; the circulatory apparatus is devoid of tone and strength; and the total area of blood space is increased, owing to parietic dilatation of the smaller vessels. In such a condition here presented the failing circulation is due not so much to the disease *per se* as to vitiated anatomical structure and physiological function, and the indications for treatment are plain. The prime object to be desired is the restoration of the function of the spinal cord, reflex centres, and nerve-endings. A drug that will do this causes a cessation in the destruction of tissue and less waste, thereby minimizing the drain upon the nutritive elements of an already deteriorated blood; vaso-motor tonus returns, the arterioles and capillaries contract, the superabundant vascular space disappears, and hence a larger amount of blood passes through the heart at each cardiac cycle, stimulating its action and promoting its nutrition.

Strychnine seems to fulfill all the indications in the morbid condition above described, for the action of this remedy being expended upon the spinal cord and this part of the nervous system in conjunction with the sympathetic playing so important a rôle in repairing and maintaining the various processes of organic life, it is natural to infer that an intelligent stimulation of its functional activity would, under such circumstances, be a perfectly logical procedure, provided no structural lesion existed in its substance. Clinical experience seems to

have established the truth of this reasoning, and Dr. Bradfute extends this evidence with the report of several cases in which symptoms of profound collapse were overcome by the use of strychnine. Its administration must, however, be guided by the effect produced. A grain of the sulphate may be given hypodermically every two hours, or oftener if necessary, until there is the desired response. It is interesting to note that in such a condition of the system large amounts are easily borne, especially if the patient has been taking large amounts of alcohol, and the author states he has given as much as four grains in twenty-four hours without producing toxic symptoms. The failing circulation of diphtheria is a typical one for the exhibition of strychnine, for in this affection in its severer forms we have all the conditions present to which its action is antagonistic.—*Therapeutic Gazette*.

#### THE TREATMENT OF CHRONIC RHEUMATISM.

The following prescription is recommended in the treatment of chronic rheumatism, by Fothergill (*Prog. méd.*, Jan. 10, 1891).

<b>R</b> Arsenious acid . . . . .	1.20 grammes.
Powdered guaiac . . . . .	12 "
Pulverized capsicum . . . . .	12 "
Alces and myrrh . . . . .	12 "

Make 120 pills. A pill to be given 3 times a day, together with a diet rich in fatty substances.

#### MEDICINE.

##### BRIGHT'S DISEASE FOLLOWING INFANTILE PURPURA.

A Mousous (*Rev. mens. des malad. de l'enfance*, Feby., 1891, p. 62) reports two cases of purpura in children, followed by Bright's disease. In one of them, that of a child ten years of age, suffering from a rheumatoid purpura, with hæmatemesis, albuminuria with œdema of the extremities and face, and disturbances of sight, came on two months afterwards. The second case was fatal. It occurred in a child, aged thirteen years, who had likewise gone through an attack of purpura. Hæmaturia, albuminuria and anasarca followed, accompanied with petechial eruptions, the patient dying four months afterwards with uræmic and dyspnoic symptoms. Post-mortem examination showed enlargement of the kidneys, and under the microscope lesions due to a diffuse nephritis were observed.

##### A CASE OF PERNICIOUS ANÆMIA OF PARASITIC ORIGIN.

Dr. M. Kotcher (*Bolnitcheraja Gazette, Botkina*, November 1st, 1890) quotes a number of authors who are against and for the fact of intestinal parasites, especially *Tænia Solium* and *Botriocephalus Latus*, often inducing pernicious anæmia with all its symptoms and signs. The majority of the quoted authors submit to the fact that very frequently desperate cases of pernicious anæmia have been known to occur in practice which depended immediately upon the mentioned parasites. In the author's own case, which was a typical one, of pernicious anæmia, improvement followed after the expulsion of the parasite. He believes that the presence of the *tænia* and *Botriocephalus* does, in many cases, cause the whole train of signs and symptoms mentioned, as characteristic of idiopathic pernicious anæmia, and quotes amongst others, Dr. Roosevelt (*N. Y. Medical Record*, 1888), who believes in the same.

##### CARDICE NERVE STORMS, OR ESSENTIAL TACHYCARDIA.

Dr. H. C. Wood, in a study of several important cases of this nature, in the *University Medical Magazine*, gives some interesting points.

The definition of the disease, he writes, would be a recurrent paroxysmal neurosis, in which attacks of excessively rapid heart action occur without obvious immediate or predisposing cause, and without pronounced pain or excessive cardiac distress, the pulse rising to 160 and upward, the sounds of the heart remaining normal; and it being frequently possible to arrest the attacks by drinking a glass of cold water and certain other procedures of apparently trifling import; the disease having apparently no tendency to shorten life or to develop organic disease, and being entirely compatible with great mental and physical activity.

The length of the attacks was from a few minutes to several hours. Sometimes they would be shortened by the patient taking a long breath, and whilst still holding his breath, drinking a glass of cold water. When about half a glass was taken the heart would suddenly quiet down, three long slow beats would follow one another and the normal beat be attained. Sometimes, however, the attack, instead of being shortened by this procedure, would be only momentarily interrupted. There was no evidence

of valvular or other heart disease during or between the paroxysms.

One of the most curious phenomena of tachycardia is the arrest of the paroxysms by the swallowing of cold water, which is probably a characteristic feature of the disease, since it has been noted in almost all the elaborately observed and reported cases. It affords a plausible argument against the probability of the rapid pulse being due to pneumogastric paralysis, since Dr. S. Meltzer has shown that swallowing is attended with a loss of tone in the vagi centre, and consequent weakening of cardiac inhibition and increased frequency of the cardiac beats. It is, however, probable that the arrest of the tachycardiac paroxysms by the swallowing of hot or cold liquids, is due to stimulation of the inhibitory cardiac centre, produced by irritation of the peripheral nerve filaments of the stomach. It is a well-known physiological fact that irritation of the abdominal nerves is capable of reflexly inhibiting the heart, and in one case it was found that the best method was to swallow the water as rapidly as possible and as cold or as hot as could be taken; if the water is only moderately cold, much larger quantities of it are required.

#### AN EARLY ATAXIC SIGN.

Weiss, of Vienna, says that an early symptom of locomotor ataxia is an inability on the part of the patient to walk backwards, while as yet, and in other ways, he may be able to walk with firmness and rapidity. Perron, of Bordeaux, has also, as we stated several weeks ago, recently suggested an early diagnostic sign, which is simply a modification of the Romberg test,—namely, causing the suspected ataxic patient to stand upon one leg, instead of two, with the eyes closed. If the patient shows a tendency to fall, it may be inferred that the spinal trouble has begun which will lead on to locomotor ataxia, even if the Romberg test fails, as it not infrequently does in cases that are not well advanced.—*New York Medical Journal*.

#### CHLOROSIS AND ITS TREATMENT.

Dr. Frederick Scholz, of Bremen, has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as

indeed was observed by Bamberger, Rokitsky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "plethora ad vasa," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnoea, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practised by Dr. Scholz is justifiable.—*Lancet*.

#### SURGERY.

##### SURGERY OF THE LIVER.

An excellent paper on the surgery of the liver, based upon nine very careful observations, is published by Terrillon (*Bull. Gener. de Therapeutique*, Feb. 15, 1891). The subject is studied under the topics of *Puncture and Incisions; Operations upon the Gall-bladder; Opening of Hepatic Abscesses; and Resection of the Liver*. The author arrives at the following interesting conclusions:

1. The surgery of the liver only demands special precautions which can easily be applied. Under ordinary antiseptic measures, punctures of the liver are inoffensive.

2. The gall-bladder can always be opened and drained. This operation is known by the name of *cholecystectomy*. If there is obstruction of the ductus choledochus, opening of the gall-bladder is a simple palliative. When it is permeable, the cure is rapid, and



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no fistula will remain. Nevertheless cholecystectomy should not be practiced unless under special indications. Its utility is not unfrequently doubtful, whereas simple incisions with proper drainage give equally good results.

3. The ablation of a piece of liver is an easy and benign procedure. To insure hæmorrhage a band of caoutchouc may be placed between the healthy portion and the diseased part.

#### THE PROPER TIME OF DAY IN WHICH TO OPERATE.

Surgeons have been divided in their opinion as to which part of the day is the most favorable for the performance and successful outcome of operations. The *British Medical Journal* discusses the matter in a recent number, stating that the advocates of morning operations assert that the patient is thereby saved the suspense of waiting until the afternoon, and that a better supply of sun-light, or its equivalent, can be depended on. Others, instead, say that morning operations imply an anxious and sleepless night for the patient, and that as night comes on more rapidly when the operation is performed in the afternoon, better chances for the patient's rest and sleep are secured. They also state that long operations seriously tax a surgeon's nerves and strength, and that for that reason the afternoon is preferable. In this respect we cannot altogether agree with them, thinking that by morning operations the surgeon secures the time at which he is best provided with muscular and nervous force, that have not been exhausted by the forenoon's work. We are also inclined to think that whether the operation be done early or late, its influence upon the previous night is about equal in either case. Those who operate frequently in the afternoon know the discomfort of finishing their operations by artificial light.

The *Journal* states that wherever freedom from noise and plenty of warmth can be procured, especially in summer, morning is probably the best time. We are inclined to think that, as darkness comes early in winter, morning operations are also indicated at that season.—*International Journal of Surgery*, Feb., 1891.

#### A NEW METHOD FOR THE TREATMENT OF INJURIES TO THE SHOULDER.

Dr. Monks reports about twenty-five cases, including some in which rheumatism undoubtedly played a prominent part. In

most of the cases the ordinary methods of treatment had been tried in vain. The result was a more or less perfect cure in about two-thirds of all cases tried, in a period of time varying from a few days to a few weeks. The most hopeful cases were those which were purely traumatic. The principal involved in the treatment was that the shoulder is more perfectly in a condition of actual rest when the arm is supported at right angles to the trunk, than when the elbow is kept at the side, because (1) the weight of the upper extremity is thus entirely taken off the shoulder; (2) the deltoid and other structures covering the joints are relaxed; (3) the circumflex nerve and other deeply seated structures are relieved from pressure. In applying this method of treatment, the whole weight of the upper extremity is taken upon the platform-shaped splint, which is supported by a firm band of webbing passing over the other shoulder. The cases for which this form of treatment is especially adapted are, those where the prominent symptoms are persistent pain and tenderness in the shoulder, or inability to raise the elbow from the side.—*Boston Med. Journal*.

#### THE PREPARATION OF LIGATURES.

Dr. J. Schou (*Ugeskrift for Læger*) recommends the following methods of preparation:

1. Sublimate Catgut: Commercial catgut is wound upon glass spools and placed in 5 per cent alcoholic solution of corrosive sublimate. This solution is changed repeatedly until it remains clear (Bergmann). Another method is to place the catgut in a 1 per cent. solution of sublimate for twelve hours, and then to preserve it in a one-half per cent. sublimate solution containing 10 per cent. of glycerine (Schede and Kümmell).

2. Carbolized Catgut: Commercial catgut is wound upon spools, and placed for forty-eight hours, in a 5 per cent. solution of carbolic acid. It is then transferred to a vessel containing a fresh solution of the same strength, when the gut is removed from the spool, and then again firmly wound upon it and preserved in a 5 per cent. solution of carbolic acid in alcohol (Block).

3. Carbolized Silk: The silk is boiled in a 5 per cent. carbolic solution for a period varying from ten minutes to an hour and a half, according to the strength of the silk, the fluid being renewed every half hour. The silk is preserved in 2 per cent. watery solution of carbolic acid (Czerny).

4. Sublimate Silk: The silk is boiled for two hours in a 1 per cent. sublimate solution, and preserved in a 1 to 1,000 solution

(Schede and Kümmell).—*Deutsche Medizin, Zeitung*, Jan. 22, 1891.

#### Transplantation of Tissue from Lower Animals to Man.

The case of transplantation from an animal, recently performed at Charity Hospital, New York, by Dr. A. M. Phelps, has commanded a wide-spread attention, and all sorts of absurd rumors have been circulated. The operation is a success in so far as it establishes the principle that it is possible to grow large masses of tissue from an animal to man, and to establish the circulation until the union takes place between opposite species without danger to either. It also demonstrates that a growth of new bone takes place when a section of bone is transplanted and its nutrition maintained by the artery of the animal. This, if continued four or five weeks, would probably unite a fracture. Owing to the inefficient dressings which are apt to occur in early operations, the contact of the transplanted bone could not be continued sufficiently long for bone to unite to bone. Dr. Phelps is confident, after viewing the specimen, and taking all conditions and surroundings into account, that bony union would have taken place if actual contact had been maintained for a longer period. The stimulation of the graft, however, has excited a reparative process in the fracture, and it now promises fair to unite. The boy walks with the aid of one crutch, or a cane.

**History of the case.**—In the month of November, last year, the patient at Charity Hospital was sent to Dr. Phelps for operation. Briefly, the history of the case is this:

The lad, John Gethins, was suffering from an un-united fracture of the lower third of the leg, the result of an operation to remedy an anterior curve of the tibia, which had existed and had slowly increased from early childhood, until he was compelled to go upon crutches.

There was no paralysis of the limb, neither was it atrophied, excepting from non-use; the muscles were perfect in every respect.

A few months after the operation of osteotomy, Dr. Phelps cut down upon the fracture and wired it, but failed in getting union. After a few months he again operated, removing all cicatricial tissue, carefully stitching the periosteum together, and wired the bone. This failed. A few months later he again cut down upon the fracture, removed all cicatricial tissue, and again freshened the ends of the bone, and engrafted decalcified

bone chips, according to Senn's method. This failed; the chips came away from the wound a few weeks after the operation. He then resorted to Thomas's method of hammering, damming, and adjusting an appliance for the boy to walk upon. This he wore for several months, but again he failed to secure union. In the mean time the boy had returned to his home.

It seemed a pity to amputate the leg. He had arrived at that stage of the case where, so far as our present knowledge was concerned, amputation was the last and only step to be taken. With all of these facts before him, Dr. Phelps felt justified in attempting any experiment which would promise to succeed in restoring the limb to usefulness, provided the danger to life was not too great.

The brave lad had submitted to every means known to surgery for the relief of his condition, and, discouraged and heart-broken, had returned to his home. When he was told there was another chance for his limb, his face brightened, and he said, "Doctor, I will take that chance." After consulting with the members of the Medical Board, of Charity Hospital, and several eminent surgeons of this city, he decided upon an operation.

It is a well known surgical fact that an amputation performed in the growing limb below the knee, or in the humerus, frequently results in what is known as a conical stump.

This necessarily leads to re-amputation, and many amputations have been performed from year to year, in the same case, for this abnormality. This was one of the reasons, but not the greatest, why he hesitated to amputate the limb.

A dog two years old was secured and prepared for the operation, carefully cleansed with soap and water, and made aseptic with a solution of bichloride of mercury.

While the patient was being anesthetized and the ends of the fractured bones freshened, his assistants, Drs. Plimpton and Mooney, prepared the dog, in the following manner: She was etherized, and then enveloped in a thick layer of absorbent cotton to the thickness of several inches, while placed in the natural sitting posture. Over this soft covering of cotton a few turns of a plaster-of-Paris bandage were made, to hold the dressing in place. The dog was not encased in plaster-of-Paris; the right foreleg of the animal protruded through the dressing. This leg was carefully shaved, and again made aseptic with bichloride of mercury, and finally with ether. The dog was now ready for the operation.

Two elliptical incisions were made down to the fracture, four inches in length, removing the old cicatrix and cicatricial tissue about the ununited ends of the bone, together with an elliptical piece of the soft parts. With a saw the ends of the bones were freshened, leaving a space about one inch between them. The portions removed proved to be eburnated, and more like ivory than bone.

The limb of the patient was now prepared for the next step in the operation, by enveloping it in a plaster-of-Paris bandage, commencing six inches above the incision, and extending to the upper third of the thigh. The foot and ankle were also covered with a plaster-of-Paris bandage. While the surgeons were preparing this part of the dressing, the assistants were preparing the dog. An incision was made through the skin, for the purpose of cutting a piece which would accurately fit the elliptically-shaped wound in the patient's leg. The elbow was now quickly excised; the radius and ulna were severed one-half inch in front of the elbow-joint, and the humerus three inches above it, and removed.

The extremity, near the paw, was amputated, leaving a piece of bone one inch in length, attached to a branch of the brachial artery among the soft parts.

The attachment of the biceps tendon was detached from the bone and loose superfluous muscular tissue removed. In the dog the nutrient artery enters the bone one inch in front of the elbow-joint. Cutting the bone, as indicated above, saved the nutrient artery from injury, and secured the nutrition to the fragment of bone, from which it was hoped that new bone would be thrown out, and at the same time stimulate the human bone to a reparative effort.

The dog was placed by the side of the patient's leg, the head toward the patient.

An aluminum dowel-pin was passed through the medullary cavity in the long axis of the bone. This was though a mistake. A steel pin inserted into the solid portion of the bone would not interfere with the circulation so much. The piece of bone was placed between the ends of the bone of the patient. The bones were crowded together, the dowel-pin entering the bones of the patient above and below. A silver wire was passed around the entire graft, and securely tied. This held the bone securely in place. Muscle was stitched to muscle, and skin to skin, the parts being evenly coaptated. A large drainage tube was inserted for drainage, which opened posteriorly. A few

turns of the plaster-of-Paris bandage secured the iron rods to the leg. The wound was dressed antiseptically.

Through the entire operation the most rigid antiseptic methods were carried out. Constant irrigation prevented the possibility of wound infection. The operation can be performed in an hour with efficient dressers. The operation appears difficult and complicated, but is quite simple when understood.

The patients (for we must now say patients) were put to bed. Both recovered from the anæsthetic rapidly. Small doses of morphine were used for both, from time to time, to allay, not so much the pain, as the uneasiness caused by the forced confinement. After three days this uneasiness passed away, and from that time on the dog and patient became friends, administering to each other's comfort—the patient by feeding and playing with the dog, and the dog by vigorous wags of the tail which showed her appreciation of the kindness.

Before the operation was performed the vocal cords of the dog had been carefully severed, under ether, to prevent any disturbance of the patient. At the end of two weeks, however, the cords had again re-united, and the voice of the dog sounded fully as strong as before the operation. The only pain caused to either patient was the twitching of the muscles of the dog as she shrank in her bed from the loss of adipose tissue. This might have been prevented by a simple procedure at the time of operation.

On the sixth day the case was dressed. The wound was found perfectly healed by primary union, without a single drop of pus. Only for the difference in the color of the skin it would have been difficult to detect the line of union. On the eighth day it was again dressed and the union was still perfect and more firm. Finally at the end of eleven days, there was an apparent shrinkage of the dog in the dressings. This allowed of motion, and it became evident that the graft would be pulled from its attachment within a few days. Consequently, as much as it was desired to continue the experiment, Dr. Phelps concluded as an act of humanity to sever the bond of union. He was prepared to do this the moment that he discovered that any surgical interference would become necessary, which would inflict additional pain to either, in order to continue the experiment.

The dog was chloroformed during the operation.

While the graft was being trimmed, and the leg of the patient dressed, the artery was



secured and nicely stitched up the stump of the dog's leg. She was then placed in bed and cared for by the nurse. As the graft was trimmed down to the parts still attached a free oozing of blood took place through the graft, which demonstrated the fact that union had taken place and that circulation had been established between the patient and the dog. Both patients rapidly convalesced. The boy spent his time writing letters to his friends and reading the papers and postal cards from persons praying that the effort to save his leg might not be a failure.

The wound was dressed and the graft examined daily. At the end of five weeks it was discovered that the bone showed no further sign of uniting, and desiring to give the boy every chance for union of the fracture it was removed. The rods, also, were removed, and the ends of the patient's bones placed firmly together, hoping to secure union because of the stimulation produced by the graft. The bone graft was irregularly covered with a new growth of bone, thus proving, he believed, that an effort had been made to unite the fracture.

This was the result of eleven days' contact, whereas at least thirty days are required for bony union to take place.

The canal of the bone was also filled with a new growth of bone, excepting where the dowel-pin passed through.

The average temperature recorded in the patient was about  $99\frac{1}{2}^{\circ}$ , in the dog  $99\frac{1}{2}$ . The average pulse of the boy was about 95. The normal temperature of the dog is above a hundred, that of the human being  $98\frac{1}{2}^{\circ}$  F. The temperature of the dog fell to below a hundred and that of the boy rose to near a hundred, or the same as that of the dog, where it remained for weeks. The pulse of the boy rose and the dog's fell until they beat nearly the same number of beats per minute, varying from ninety to one hundred and ten. The boy ate, slept, and felt well. There was no sepsis. Whether this peculiar condition of temperature and pulse was due to the interchanging of blood between the animal and the patient, he was unable to say; further observation is necessary to verify it.

After the eleventh day, owing to the plaster-of-Paris accidentally getting into the wound, pus for the first time was seen. This rapidly disappeared.

The operation had a two-fold object: first, to establish the fact that large masses of soft parts could be transplanted from an animal to man; second, to unite an ununited frac-

ture by a section of bone from the dog. It was successful in demonstrating the first proposition, but partially failed in the other in so far as the actual growing of the bone into place is concerned. This was due entirely to a defect in the dressings. The principle of transplantation established means much to humanity; its application will be found useful in many cases which now defy the best efforts of the most skillful surgeons in the world.

Among the cases suitable for the application of the principle are those cases of fractures which resist all efforts for their union, and which must necessarily result in amputation; ulcers of a particular class which can be cured by no means known to surgery. Scalps ripped from the heads of factory girls by machinery. Months and often years have been taken to skin-graft back the scalp to cover the skull, and numerous friends have been flayed to supply the material.

Thiersch's method of skin-grafting has been a step in advance of the older methods, but a martyr must be found to submit to the flaying. A dog would be found better adapted for the work as hair could be transplanted with the flap. Sloughing, following amputations in the upper third of the tibia resulting in cicatricial contraction with indolent granulations covering the end of the stump caused by the bad circulation from pressure are now cured. But how? By amputation at the knee-joint or else so near to it that an artificial limb cannot be worn without a useful knee-joint. Animal transplantation should be resorted to before amputation is performed.

If circulation could be established between opposite species, the elements of whose blood differed, without injury to either, a step would be taken which might lead to the relief of many a sufferer. Then large masses of tissue could be grafted from an animal to man, the circulation of the animal furnishing that which the patient could not supply, as in bone-transplantation. Or in grafting of soft parts the circulation of the dog would keep alive the graft until it had become firmly united to the patient, then it could be severed.

In bone-transplantation it was expected that in four or five weeks the animal would have thrown out a provisional callus and at the same time stimulate the fracture to repair. A dog was selected because the elements of its blood very closely resemble those of man. The reparative energy of a dog is very strong and his power of endurance great. No unnecessary cruelty is inflicted and

from the confinement but little suffering occurs. Of course, it is useless to reply to those who have denounced the operation as cruel and unnecessary. Those who understand the motive which actuates the surgeon, can comprehend how, with all sympathy for the brute, his sacrifice of limb may be demanded for the good of his master, man. They, too, can appreciate the reluctance of the surgeon to inflict wanton suffering, whether upon man or brute, and can understand how such an operation only seemed commendable when a more than commensurate benefit was promised. To those whose eyes are blind to human suffering, and whose sympathies are all for the brute, we have nothing to say.

This poor lad personally demanded that every means should be exhausted which promised relief before amputation should be resorted to. He still demands it, and the demand is one which a humane surgeon should consider before resorting to an operation which would involve the loss of a limb and possibly life.

#### GYNÆCOLOGY.

##### WHAT EXPERIENCE TEACHES ONE TO UNLEARN.

One of the most respected gynecologists of this country, Prof. William Goodell, in the *University Medical Magazine*, has recently stated that "every earnest worker in any field of the inexact sciences finds himself compelled to unlearn as well as to learn," and on this basis he communicates a sketch of a number of things, chiefly traditional teachings, which he has himself, in his own experience, learned to unlearn. His summary, of course, relates to the special branch of which he has been a distinguished teacher and practitioner; but many a general practitioner, if he were as honest and candid, could teach his professional brethren similar lessons. Among other things cited by him are the following:

He has learned to unlearn the grandmotherly belief that the climacteric is in itself an entity, and that, as such, it is responsible for most of the ills of matronhood, and especially for that of menorrhagia.

He has learned to unlearn that anteversion and anteversion in themselves—that is to say, as displacements merely and without narrowing of the uterine canal—are necessarily pathological conditions of the womb.

He has long since abandoned the idea cherished by that class of waistless and wit-

less nurses, now happily obsolescent, that the parturient woman is to be swathed like a mummy and to be kept as immovable.

He expresses his disbelief that mammary abscess comes from "caked" breasts, or from breasts overdistended from a secretion of milk too great for the infant's needs. Mammary abscess, in the suckling woman, comes, in his opinion, from cracked nipples, and from cracked nipples alone.

He has wholly freed himself from the belief that cellulitis is at the bottom of most female ailments, and that the hot-water douche is its cure-all.

He has learned to unlearn the teaching that woman must not be subjected to a surgical operation during her monthly flux. Our forefathers, from time immemorial, have thought and taught that the presence of a menstruating woman would pollute solemn religious rites, would sour milk, spoil the fermentation in wine-vats, and much other mischief in a general way. Influenced by hoary tradition, modern physicians very generally postpone all operative treatment until the flow has ceased. But why this delay, if time is precious and it enters as an important factor in the case?

Long ago he came to the conclusion that the womb, like the nose, has its own secretions; and that, because the cervical canal is stopped up with mucus, it is not to be treated any more harshly than a stopped-up nose. This nasal analogy led him soon to think that even uterine catarrhs are not of such paramount importance as to merit heroic treatment, and that metritis and endometritis, in so far as symptoms are concerned, are often idle words.

He has learned to unlearn the idea—and this was the hardest task of all—that uterine symptoms are not always present in cases of uterine disease; or that, when present, they necessarily come from the uterine disease. Seemingly urgent uterine symptoms may be merely nerve-counterfeits of uterine disease. He has, therefore, long since given up the belief which, with many, amounts to a creed, that the womb is at the bottom of nearly every female ailment. As an outcome of much that he has learned to unlearn, Professor Goodell has arrived at this very short gynecological creed: "I believe that the physician who recognizes the complexity of woman's nervous organization, and appreciates its tyranny, will touch her well-being at more points and with a keener perception of its wants, than the one who holds the opinion that woman is woman because she has a womb."—*College and Clinical Record*.

## ENDOMETRITIS AND ITS TREATMENT.

Dr. Paul F. Mundé, in speaking of a patient having what is known as a chronic endometritis, said that this is not a proper name to give it, because there is no inflammation present. Continuing his remarks he said:

Now, that you may more clearly understand this condition, and the manner in which this discharge is brought about, I will try and explain its mechanism to you in as few words as possible. After confinement the membrane which lines the cavity of the uterus is, as you know, shed, and a fresh mucous membrane is formed beneath it. If this membrane were shed off at once, it would leave underneath it a raw, bleeding surface, which is not mucous membrane at all. This process of shedding is, however, a gradual one, and it takes about two months before a new membrane has been formed and the uterine mucous membrane has returned to the same condition.

The treatment resolves itself into drainage and the application of mild astringents or caustics to the endometrium. I think the tincture of iodine will answer best in this instance, though iodized phenol for a first application might be preferable. In applying this fluid it is necessary to protect the vagina from injury by a pledget of cotton or other material, for carbolic acid or iodine will destroy the epithelium of the vaginal wall.

This application is made by means of a cotton wrapped applicator, which after its introduction into the cavity of the uterus, should be permitted to remain there for a minute or so, for by too rapid a withdrawal of the instrument, you are very apt to tear away the eschar that may have formed as a result of the application. Have your tampons of tannin and iodoform ready, so that you can apply them on withdrawal of the applicator. Instruct your patient to keep quiet the rest of the day, and remove the tampons on the following morning, and use hot douches at a temperature of 110° or 115° F., with the patient in a recumbent position. In about four days you may again repeat this intra-uterine medication, and if you then find that there is little or no oozing, you can conclude that you have done enough cauterization, and apply the compound tincture of iodine in the same way. The latter treatment may have to be kept up for several weeks or months.

There are various other ways in which these applications can be made to the endometrium, besides the one I have just alluded

to. The practice of injecting iodine or other fluids by means of a syringe into the uterus is certainly a much more efficient method, but it may prove so very efficient that you will not desire to try it a second time. I have seen uterine colic follow its use, and the uterine colic thus induced, is apt to be so severe as to bring on collapse. There have been cases of death from peritonitis, occurring as a result of this procedure. I therefore, warn you against this method of applying these medicinal agents to the interior of the uterus. Some years ago I devised a fine syringe with a point no larger than a sound, perforated with numerous little holes, with which I made applications to the uterine cavity. I used a weak solution of nitrate of silver for this purpose, but found so much pain followed its employment that I have refrained from resorting to this method for the past four or five years.

Another form of making applications to the interior of the uterus is by means of pencils of gelatine, containing the medicinal agents you wish to employ. There is one great drawback to this procedure and that is the impossibility of obtaining gelatine pencils that remain soft and flexible. I have had a large number of these pencils prepared, but have discovered that in the course of a few weeks they become so hard that they act as irritants, and give rise to severe colic.

Another agent I employ to a great extent for intra-uterine medication is a fifty per cent. solution of chloride of zinc. This is a very effective remedy, but it is necessary to keep the patient in bed after using it. It should be applied but once in ten days, and only a few times in any given case.

The *sine qua non* for intra-uterine applications is a patulous uterine canal, with the external and internal os so wide as to permit the passage of a good-sized applicator, wrapped with a large film of cotton, up to the fundus, if you choose. Of course, in all instances, the removal of the cause of the affection by appropriate remedies, if you can do so, is the proper course to pursue, whether that cause be pelvic congestion, prolapse, constipation, abdominal plethora or some other condition.

## OBSTETRICS.

## ANÆSTHETICS IN RELATION TO MIDWIFERY.

W. R. Reid (*Glasgow Medical Journal*).—In the course of a discussion on anæsthetics at the Glasgow Medico-Chirurgical Society, observed that chloroform and other



were equally valuable for securing thorough anaesthesia in operative midwifery. For the administration of chloroform he preferred a single ply of flannel on a small wire frame used with a drop-bottle. In this way a mild degree of anaesthesia could be readily kept up, and deepened in a minute or two if required. In the case of ether he advocated the use of Clover's inhaler as the only safe plan. He had, indeed, substituted ether by the open method when a patient seemed very weak, and no bad result followed. On the only occasion, however, when he used ether during a lengthened operation the patient was ill for a fortnight afterward with bronchitis and congestion of the lungs. The ether was administered on a sponge in a water-proof cone. Ether had been given in a recent case by Clover's inhaler with perfectly satisfactory results. While he always examined the heart before giving an anæsthetic, yet the knowledge that heart disease existed only made him more anxious to use chloroform or ether, "because in such cases the strain of a severe labor is vastly more dangerous without an anæsthetic than with it. The same holds good with regard to diseases of the kidney." After five-and twenty years' experience of anæsthetics in midwifery cases, Dr. Reid said he had never seen a fatal issue. While his experience of chloroform had been very large, that with ether had been just as limited. "A lying-in woman is peculiarly fitted for escaping the dangers usually connected with anaesthesia. The left ventricle of the heart is considerably hypertrophied, and so less likely to weaken readily in its action. She is kept in the recumbent position, and so, to that extent, defended from syncope. The action of the heart is aided by the alternate relaxation and contraction of the uterus, and, lastly, the anaesthesia tends to produce anæmia of the brain, whereas the labor pains give rise to an engorgement of that organ. These causes, taken together, seem to me to account for the great rarity of fatal results in connection with obstetrical anaesthesia." He is inclined to believe that there is some truth in the assertion that chloroform may kill a lying-in woman by inducing post-partum hæmorrhage. That danger, however, can be quite set aside by the use of the subcutaneous injection of ergotin and by manual compression of the uterus. He has good reason for believing that chloroform has no danger to the fetus. He admits it is hard to explain why, with chloroform circulating in the blood of the mother, the fetus should not run a good deal of risk. He comes to the

following conclusions: "1. In severe labor and the ordinary operations I am content to use chloroform in view of its convenience and safety in those circumstances. 2. In long and severe operations, especially where there is much loss of blood, I prefer ether, given by means of Clover's inhaler. This involves more trouble, but its probable greater safety ought to turn the balance in its favor. 3. I hold strongly the belief that while it is advisable to have two medical men present when an anæsthetic is given, it would be wrong to enforce this by law.—*Archives of Gynecology.*

#### THE DIAGNOSIS OF PLACENTA PRÆVIA BY PALPATION.

Spencer reports in detail seven cases of placenta prævia in which he diagnosticated, by abdominal palpation, the presence of the placenta in, or its absence from, the front wall of the lower uterine segment, the diagnosis being subsequently verified by internal examination. The cases were head presentations in multiparæ before pains were present and before the membranes had ruptured; no anæsthetic was used.

In three cases the exact site of the placenta on the front wall of the lower segment was determined; in two cases the placenta was felt when by vaginal examination it could not be found. The absence of the placenta from the anterior wall was diagnosticated in four cases.

The patient should lie on her back for these examinations, the bladder having been emptied; the examination should be gentle, made in the absence of pains, prolonged for several minutes, or repeated, if needed. When the placenta is in front of the head, it is felt as a spongy mass between the fingers and the head. Its edge feels like the segment of a circle, within which the touch is obscured; outside the child is plainly felt. Impulses to the head through the placenta are distinctly felt where the placenta is absent.—*American Journal of Medical Sciences.*

#### PÆDIATRICS.

##### THE TREATMENT OF WHOOPING-COUGH.

In a lecture delivered at the Hospital for Sick Children, Paris, Jules Simon (*Journal de Médecine*, 1890, p. 577) remarks that the treatment of the first period is of great importance, for the future progress of the case depends upon the care which is given to it at that time.

One must be well convinced, contrary to the method which was followed formerly, of the necessity of keeping the child indoors; it is often even necessary to keep him in bed as one would do for a serious attack of bronchitis. Archambault has insisted upon the importance of this fact, and since Simon has adopted the same plan he has observed almost no complications in whooping-cough in children who were cared for in time. The pharmaceutical means are not to be neglected, but at best are only secondary; belladonna is, perhaps, the best of all. It is well to employ the following formula: Tincture of aconite root, tincture of belladonna, elixir of paregoric, equal parts—ten, twenty, or thirty drops a day, according to the age of the patient; if there is fever increase the aconite, or if intestinal catarrh increase the paregoric. Chloral may be given in the evening and sulphate of quinine in the morning. These drugs may be used by injection, the former in 15-grain doses, and the sulphate of quinine in three- to five-grain doses, especially if the heart is agitated. We must combat the catarrhal secretions if they are too abundant; under these circumstances an emetic may be given once a week; with the infusion of wild narcissus (daffodil) given every two or three days one obtains a state of mild nausea which favors the expulsion of the secretions; rhatany will also diminish them; of this we may give from three to five grains of the extract before each meal. Coffee is advised, to combat the dyspepsia. The treatment for the third period is that directed to the bronchial adenopathy; it consists principally in the use of tonics, iodine, cod-liver oil, etc., and later, an outdoor life.

To the remedies referred to above, one may add, with advantage, in certain cases, henbane, to combat the meteorism, in doses of from two to ten grains a day, warm friction of the abdomen with chamomile oil, containing tincture of nux vomica, 4 parts to 100, combined with digitalis when there is anuria, a thing that often happens.—*American Journal Medical Science.*

#### TREATMENT IN CONVULSIONS IN CHILDREN.

In a case of convulsions in a child, if the patient is cyanotic, a few whiffs of amyl nitrite, followed by inhalations of chloroform to relax spasm, should be given. These should be followed as soon as possible by hypodermic injection of tincture of veratrum viride, one-half drop for each year of age up

to six years. The veratrum may be repeated in half an hour or an hour, if the convulsions recur. If the convulsions are uræmic, a small dose of morphine may be added or given separately. In all the cases in which I have employed the foregoing treatment the effect was remarkably good, and in but one case have I had to repeat the injection of veratrum. The convulsions cease, the muscles relax, the pulse becomes slower, the temperature falls, and the skin becomes moist. Indeed the danger is over in less time than by any other means I have seen employed. Appropriate after-treatment, as may be indicated, should, of course, be adopted.—*Med. News.*

#### HYGIENE.

##### AN ANALYSIS OF THE STATISTICS OF FORTY-ONE THOUSAND, FIVE HUNDRED CASES OF EPIDEMIC INFLUENZA.

Dr. Benjamin Lee, in *The Journal of the American Medical Association*, March 14th, 1891, summarizes the replies of 265 physicians to inquiries made, having a practical bearing on the gripe epidemic of last year, and furnishes some valuable statistics:

People appeared to look forward to the appearance of *la grippe* on this side the ocean as an experience, which, on the whole, would constitute a mild amusement, rather than an occasion of suffering, distress, terror and death. A very few weeks, however, sufficed to convince both the public and the profession that influenza meant a good deal more than a bad cold in the head.

Discovering this fact, and observing the serious involvement of the nervous system in a large percentage of the cases, the inquiry suggested itself to those who were looking for nothing more than a bronchial catarrh, "Is this influenza after all, or is it some other epidemic disease, and if some other, is it not dengue?"

The first point of distinction that we may make is in regard to the mode of extension of the two affections. Influenza, as we have had recent demonstration, spreads like a flood, inundating whole sections in an hour, while dengue works along gradually, establishing centres of infection here and there, enabling its course to be easily traced. In their sudden onset, intense headache, pain in the back and limbs, and excessive lassitude they have much in common, but, while the fever in dengue is invariably of a high grade, in influenza it is often slight or ab-

ment altogether. The catarrhal and pneumonic complications of influenza, the dyspnea, the feeble piping voice, are very rare in dengue, while on the other hand, the latter is characterized by violent and persistent gastric disturbances.

An erythematous eruption followed by desquamation, beginning in the face and descending, is rarely absent in dengue, and as rarely seen in influenza. Dengue very rarely terminates fatally, influenza, as we know to our cost, often does. While, therefore, there are points of similarity between the two affections, especially in regard to their nervous phenomena, the distinctions are sufficiently marked to prevent any misconception, when large numbers of cases are under consideration.

It is probable that not a single individual entirely escaped its pernicious effects. Its manifestations were so various, affecting in one the bronchial tubes, in another the nervous system, now the brain and now the bowels, here peritonitis and there pneumonia, that it was a long time, comparatively, before physicians, even, recognized it in its protean forms. It is scarcely conceivable that a disease which spreads with such astonishing rapidity, goes through the process of re-development in each person infected, and is only communicated from person to person or by infected articles. And yet this theory has been maintained by a few authorities who claim that it is always more prevalent along lines of travel, and that it did not progress more rapidly than modern means of communication would enable it to do.

The following is an analysis of the results obtained :

Number of physicians reporting, . . .	265
Number of cases, . . . . .	37,275
Adults, . . . . .	28,302
Children, . . . . .	10,973
Number of cases nervous, . . . . .	6,913
Number of cases catarrhal, . . . . .	16,434
Number of cases-inflammatory, . . . . .	5,829
No. of deaths directly caused, 56 }	
No. of deaths indirectly caused, 205 }	261
Immediate cause of death, bronchitis, . . .	8
" " " pneumonia, . . . . .	117
" " " phthisis, . . . . .	42
" " " nervous, . . . . .	21

Supposing, which there is no reason to doubt, that the 265 physicians who replied, represent a fair average of the practitioners of the State, this would give us 1,120,000 persons as having been sufficiently ill with the disease to demand medical aid or come beneath the observation of a medical man, and 7,879 deaths directly or indirectly caused by the epidemic influence in the

State of Pennsylvania alone. We know that there were many who suffered mild attacks who never sought advice, and many more whom physicians, in their excessive haste, failed to enter on their visiting lists although they may have prescribed for them.

In fact this is exactly the return that was made in some instances :

"Treated an immense number of cases but kept no record."

Nearly one-half of the cases reported were in the city of Philadelphia. As the Philadelphia physicians reporting constituted only about one-third of the whole number, the disease must therefore have been more prevalent in large cities than in the country. To be exact, the average of cases to each physician reporting was 140; while the average to each Philadelphia physician reporting, was 193.

The disease seems to have been especially prevalent in mining towns. Two physicians in Shamokin, a place of about 12,000 inhabitants, report 950 cases between them. In Greensburg, a place of about 6,000 inhabitants, two physicians report 737 cases. In the little village of Portage, Cambria County, numbering 650 inhabitants, one physician reports 400 cases. Ill-fated Plymouth suffered seriously as did the most of the other mining towns and villages of Luzerne County. Scranton was also severely visited.

One curious fact, developed by the investigation is that the disease was observed quite as early in the extreme western portion of the State as in Philadelphia on the eastern border. Indeed, more observers in proportion to the population report having observed cases in November in Allegheny County than in Philadelphia County: as though a disease-bearing air current had passed over the eastern border at a great altitude and dipped down in the western portion of the State.

Of the 265 physicians reporting 206 made the distinction as to the predominant type of the disease. While it is to be regretted that all did not, still this number, representing more than 29,000 cases, is ample for purposes of deduction.

Nearly 7,000 of these are recorded as belonging to the nervous type. This is very nearly 25 per cent. and does not, of course, preclude the presence of nervous symptoms in a large proportion of those set down as catarrhal or inflammatory. And this takes us back to the point from which we started, namely the marked predominance of the



nervous element and the protean character of the manifestations in this singular affection. How shall we account for the production of such varied morbid phenomena by a single morbid agent?

To the writer, the most probable explanation is, that the morbid influence, whether germ, microbe or occult meteorological departure from the normal condition, spent itself directly upon the nervous system, and more particularly on the vegetative portion of that system, or to particularize, still further upon the pneumogastric nerve and its associated ganglia with partial implication of the spinal cord. Nearly all phenomena which distinguish influenza from other similar affections can be readily accounted for by this theory; the excessive nervous prostration, so entirely out of proportion to the catarrhal disturbance, the emotional depression, causing the victim to weep incessantly without consciousness of any reason for so doing, the sense of constriction about the larynx, the strident cough, piping voice and occasional aphonia, the sudden congestions of the lungs, the pain and stiffness in the dorsal muscles, especially along the nucha, the gastric and intestinal disturbances, the intense headache, and transient manias, all can be accounted for by the supposition that the great balance wheel of organic life has become deranged—and on no other theory so simply.

The fact that all the remedies which were found most beneficial in the treatment of this affection are nervines, such as phenacetine, morphia and nux vomica may also be adduced as strongly confirmatory of this theory.

#### MODE OF ENTRY OF THE TUBERCULAR POISON INTO THE BODY.

Dr. Bollinger believes that the frequency of infection through the skin has been underestimated. Several cases have been recorded of direct inoculation by wounds received from broken spittoons, by bites, operations, earrings, etc. Eczema and impetigo increase the susceptibility of the skin. No case has as yet been attributed to vaccination, and it would appear that the tubercle bacilli are unable to live in the vaccine lymph. They also appear unable to pierce the pores of the skin as do some of the pyogenic organisms. The susceptibility of the mucous membranes is increased by inflammatory processes, such as otitis, rhinitis, conjunctivitis, and pharyngitis. The poison travels to the submaxillary glands and those

of the neck, and generally causes local tuberculosis of the glands. The chief point of infection is of course the lungs. Local predisposition is best exhibited by apices which have been before diseased, but have undergone a healing process. The movement is deficient both in expiration and inspiration, and the liability to reinfection is increased by anæmia, irritants, constitutional influences, such as diabetes, disturbances of digestion, and unhealthy surroundings generally. The poison may pass through the lungs and attack the bronchial glands, under which circumstances the disease may be very insidious. The predisposition of the lungs again exhibits itself in metastasis; not every tubercular disease of these organs is due to inhalation of the bacilli or their spores. As regards primary tuberculosis of the testicles, joints, and bones, Bollinger considers that a latent hæmatogenic infection must be understood, which leaves as little trace of its point of entry as does a primary septic endocarditis or an osteomyelitis. Tubercular disease of the larynx depends upon an auto-infection through the sputum. The rarity of this disease in children is explained by the infrequency of pulmonary cavities in the rapid forms of phthisis. Primary tuberculosis of the intestine generally, combined with an affection of the mesenteric and retroperitoneal glands, is usually occasioned by means of vitiated food and contaminated feeding utensils. Secondary tuberculosis of the intestine depends upon an auto-infection. The tubercular poison passes through to the intestine unaltered by the juices of the stomach and attacks the Peyer's patches and solitary follicles. Tuberculosis of the peritoneum, which is three or four times as common in men as in women, can arise directly from ulcers of the intestines, from tubercular abdominal glands, or, especially in women, from the urogenital tract; further, through contagion from the lungs and pleura, and finally in the course of miliary tuberculosis, or from caseous bronchial glands. Primary tuberculosis of the peritoneum is quite rare. As regards the infection from milk, this is, in Bollinger's opinion, undoubtedly due to the udder of the cow being affected with the disease. Infection through the milk of tuberculous women has not yet been proved. *Münchener Medizinische Wochenschrift.*

#### REGULATION OF PROSTITUTION.

Moeller in the *Journal des Maladies Cutanées*, December, 1890, makes the case

tion that the measures adopted in the regulation of prostitution are inefficient from a hygienic point of view. While admitting that the danger of contagion is greatest during the primary stage of syphilis, and slightly less during the secondary period when the external manifestations of the disease are present, he claims that during the entire secondary period the person infected is able to transmit the disease, even when there are no external manifestations, as has been proved by the infection of nurses from infants and *vice versa*, and by the infection of women during intercourse. This contagiousness of syphilis during the latent stage of the secondary period, is but little marked if the body of the infected person does not present any external solution of continuity; but the slightest scratch or laceration of the skin or mucous membrane considerably increases the danger of contagion. For this reason Moeller claims that persons afflicted with syphilis should abstain from sexual intercourse not only during the existence of the primary sore, or when the secondary manifestations are present, but in the latent period as well. This is the duty of every man or woman affected with syphilis, to neglect which is culpable. He goes on to say that our present regulations are based upon the assumptions of physicians at the beginning of this century, who believed that gonorrhoea, soft chancre, and syphilis, were all of the same nature, and only contagious in the initial stages. The researches of the succeeding years have entirely revolutionized these views, hence the necessity of altering the laws governing prostitution to meet the dangers which have been discovered.

As a substitute for the present laws upon the subject he suggests a system as follows: Every person who is convicted of certain offenses relative to prostitution, or who has committed some infraction of the articles of the penal code, should be, if he be sentenced to imprisonment, submitted to a physical examination at the moment of arrest. This examination should be repeated at the expiration of punishment. If the physician confirms the presence of syphilitic lesions, the patients should be admitted into a hospital for treatment. In addition, they should be forbidden to resume their trade, and instructed not to indulge in sexual intercourse as long as the dangers of contagion exist. They should likewise be obliged to submit to periodical visits during a variable time, to be determined at the beginning of the sickness. The advantage which Moeller claims for this system is, in the first place,

the suppression of the registration of prostitutes; second, in place of leaving to hazard or to arbitrary attention the designating of the prostitutes who should be submitted to sanitary visits, it is the prostitutes who, by the infractions they have committed, would designate themselves, in virtue of a positive law which they know and which they ought to recognize. Moreover, the civil authorities would no longer recognize the right of the infected prostitutes to continue their business, and would interdict them from the practice of their profession, so long as they could be dangerous to the public health. Thus would disappear that security which the public accords, rightly or wrongly, to the registered prostitutes, who are considered as healthy in virtue of the certificate delivered after the inspector's visit. Finally, the prophylactic system thus designed would neither violate individual liberty nor the moral law.

### MEDICAL CHEMISTRY.

#### CHEMICAL REACTIONS OF KOCH'S TUBERCULIN.

In the *Farmatzevtichesky Jurnal*, No. 9, 1891, p. 136, Mr. I. Gertel, a chemist, publishes the result of his examination of a specimen of Koch's "tuberculin." The "lymph" forms a cinnamon-brown, odorless, viscid fluid, sp. gravity of 1.17 and of a neutral reaction. Concentrated sulphuric acid dissolves it easily and completely, the solution being at first colorless, but after a while assuming a cinnamon-brown color. Concentrated hydrochloric acid does not manifest any action on the lymph, while concentrated nitric acid produces a slight opacity, appearing at the point of contact between the two fluids. When immersed in a sulphuric acid solution of tuberculin, crystals of bichromate of potassium soon become covered with bubbles (which are due to glycerine being present in the preparation). The following reagents give considerable precipitates on being added to a 10 per cent. aqueous solution of tuberculin: Tannic acid, picric acid, chloride of gold, nitrate of silver, sulphate of copper, nitrate of mercuric suboxide; but chloride of platinum, neutral acetate of lead, and chloride of tin, produce a comparatively slight precipitation; iodide of potassium and cadmium (double salt) give a distinct turbidity, but no actual deposit. The following substances behave entirely negatively toward the solution: Iodide of potassium

and mercury (double salt), bi-iodide of potassium, chloride of iron, ferro-cyanide of potassium, chloride of mercury, molybdenate of ammonia, rhodanide of potassium, chromate of potassium, ammonia, and sulphate of iron. When heated with acids, the aqueous solution assumes an intense yellow color. Strongly diluted aqueous solutions give voluminous precipitates with alcohol, the deposits being re-dissolved on a free addition of water. A 10 per cent. aqueous solution, as well as more diluted ones, when kept at the ordinary room temperature, becomes turbid even on the next day. As to the lymph itself (that is, an undiluted preparation), it has not undergone any changes even after 4 months' keeping.

#### THE DA COSTA LABORATORY OF BIOLOGY.

It is announced that the trustees of Columbia College have determined to devote the late Mr. Charles M. Da Costa's bequest of \$100,000 to the foundation endowment of a laboratory of biology, to be built on the grounds of the medical school (the College of Physicians and Surgeons), and that the professor in charge of the department is to be designated the Da Costa professor of biology. This is an early and striking manifestation of the good likely to result from the union of the College of Physicians and Surgeons with Columbia College.

#### THE PHONOGRAPH OF MEDICINE.

The applicability of the phonograph to the record and demonstration of defects in speech has been well illustrated during the past week at the Royal Medical and Chirurgical Society and at the Hunterian Society. At the first named, Dr. Hale White and Mr. Golding-Bird were enabled by means of this instrument to allow the Fellows present to hear the curiously defective speech of two children, and to contrast this with the improvement effected by treatment, for the subjects were present, and after the phonograph had given their past utterances, their present speech was demonstrated *visu voce*. The papers read by the above gentlemen and that by Dr. F. Taylor led to an instructive debate, which was further illustrated by some marked cases introduced by Dr. Hadden. The outcome seemed to be that these defects in articulation are probably of central origin, and not due to any mechanical interference with the organs of speech. Whether, as suggested by Dr. Langdon Down and Mr. Spencer Watson's the defect was primarily one of audition it is

a question certainly worthy of consideration. Another point raised was whether the defect should be considered one of speech or language, and some exception was taken by Dr. Taylor, Dr. Pye-Smith, and others, to the use of the term "idioglossia," which, however, was ably defended by Dr. Hale White. The other phonographic demonstration at the Hunterian Society was by Dr. Hughlings Jackson, who thus reproduced the characteristic speech of a subject of cerebro-spinal sclerosis. There can be little question that the phonograph will ultimately prove very useful, especially in the preservation of certain anomalies of articulation, and its further extension to other sound phenomena in the range of clinical medicine may be justifiably hoped for.—*Lancet*.

#### NEWS AND MISCELLANY.

WE are authorized to state that Dr. J. M. DaCosta is not going to Europe this year as reported.

DR. J. M. BALDY has been elected Professor of Gynecology in the Philadelphia Polyclinic and College for Graduates in Medicine.

THE twenty-sixth annual meeting of the members of the Michigan State Medical Society, will be held in Saginaw, Thursday and Friday, June 11th and 12th, 1891, at Germania Hall, a building so situated as to be readily reached from all principal hotels by electric cars, and sufficiently commodious to accommodate the work of the General Sessions, the Committees and all of the Sections.

The President's Annual Address will be given by Dr. L. W. Bliss, Saginaw; subject to be announced later.

The Address of the Orator appointed by the Section on the Practice of Medicine, will be delivered by Dr. Heneage Gibbes, Ann Arbor, subject, "Phthisis."

The Orator appointed by the Section on Obstetrics and Gynecology, is Dr. J. H. Kellogg, Battle Creek, and the subject of his address will be: "The Influence of Dress in Producing the Physical Decadence of American Women." This address will be appropriately illustrated by stereopticon views.

Dr. H. O. Walker, Detroit, will give the address on Surgery; subject to be announced later.

THE Medical Society of the State of North Carolina, will meet at Asheville, May 26th, 27th and 28th, 1891.